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## ORIGINAL LECTURES.

## CLINICAL LECTURE

## ON CONJUGAL ONANISM AND KINDRED SINS.

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**G**ENTLEMEN.—Inasmuch as certain members of the "London Dialectical Society" have been poisoning the public mind with subtle arguments against "Over-Population and Large Families," I purpose this morning to devote my hour to some subjects which are not strictly medical, and yet with salient medical aspects,—subjects in themselves vile and filthy, but which concern us as physicians. The wise son of Sirach has laid down the abstract truth that "the knowledge of wickedness is not wisdom;" and yet, for the correct interpretation of diseases, we must intrepidly search out their causes, whether moral or physical, however loathsome or impure they may be. Receive, then, these necessary supplements to your instruction in the attitude of true students; for to such the knowledge of immorality cannot be immoral.

Early in the practice of your profession, you will, I am sorry to say, find out that many of your patients, who should be the heads of large families, are practising detestable arts to avoid offspring. You will, on the other hand, be approached, perhaps indeed be hard pressed, by husbands, and, for that matter, by wives also, for some method of congress unattended with the risk of impregnation. You will also be consulted for the mental and bodily infirmities resulting from these and other sexual sins. You must not, therefore, go out into the world ignorant of these evils, and consequently incompetent to grapple with them. It is, however, so hard a task to discuss such subjects in acceptable language, that I confess to some squeamishness, and would much rather refer you to suitable text-books. Unfortunately, although our land is flooded with a copious literature treating of the conjugal relations, with rare exceptions it panders to our worst instincts and defiles with the slime of an impure fancy. Impudent quacks and men of battered reputations must not be your guides; far better is it for you to learn a new thrust of fence from a friendly foil, than from the stab of a foe.

My purpose is less to discuss the moral obliquity of these secret sins of the community than to show the resulting disorders. Yet I shall not limit myself to the one point of view, for the conjugal relation is twofold in its nature: it has a moral as well as a physical expression, but so interwoven that it is hardly possible formally to dissociate them. Nor would it be wise for a physician so to do; for who, so well as he, can determine how far a disturbance in the one will affect the other? Moreover, so irreparable is the moral and physical degradation resulting from these vicious sexual relations, so damaging are they to good health and to good morals, so fatal to national prosperity, that I cannot go far astray in assaulting them with every available weapon.

You have all had a religious training and respect the teachings of the Bible; let us see what light they throw upon the conjugal relation. The first words addressed by God to our first parents conveyed the following blessing and command: "And God blessed them, and God said unto them, Be fruitful, and multiply, and replenish the earth." The same blessing and com-

mand, in precisely the same words, were twice given to Noah. Abraham and Ishmael received the same blessing, and so did Isaac thrice in one chapter. Laban's household sent away their sister Rebekah with the same blessing. "Give me children, or else I die," was the cry of Rachel. Jacob called his offspring "the children which God hath *graciously* given thy servant;" and the same patriarch, when dying, raised himself upon his staff in order with greater solemnity to invoke upon his beloved son Joseph "blessings of the breasts and of the womb." The Psalmist declares that "children are an heritage of the Lord: and the fruit of the womb is his reward;" and in Exodus we read that if a man "take him another wife, her food, her raiment, and her *duty of marriage*, shall he not diminish." Throughout the Old Testament you will find that fruitfulness was regarded by Jew and Gentile as the greatest of earthly blessings, and that as such it was the reward of the righteous, and as such it was withheld from the wicked. How a profanation of this blessing was regarded by God you all know from the history of Onan, who was slain for resorting to one of the "preventive measures" in vogue at the present day. Again, in the New Testament we find St. Paul giving the following advice to the married Christians at Corinth: "Defraud ye not one the other, . . . that Satan tempt you not for your incontinency. Let the husband render unto the wife due benevolence; and likewise also the wife unto the husband," etc. I have not the time to quote all that the apostle says upon this subject; but, mind you, this advice was given in troublous and persecuting times; times in which the temptation was great to prevent the increase of families; times to which the words of our Saviour were especially applicable: "Woe unto them who are with child, and to them that give suck in those days."

To these scriptural precepts and blessings you may perhaps object that they were designed for special purposes, and that, as such, they cannot concern the present generation of men. While unwilling to admit this, I reply that there is a natural religion as well as a revealed religion: the one, God's book; the other, Nature's,—a "Second Bible," as Bacon happily terms it. You have heard what the one enjoins; now listen to the teachings of the other. Let me turn to our Case-Book and read out the history of one of our clinical patients. Some of you have seen her in my private room, but, for obvious reasons, I have not brought her before the assembled class.

A. B., aged 30, married ten years ago, has had two children, one of them dying shortly after birth. Six years ago she and her husband came to this country and opened a small store. She was at that time in robust health, "very happy," and cheerfully waited upon their customers. For no assignable reason, her health soon began to fail, and six weeks ago she came for advice in a truly pitiable plight. To use her own language, she was "very weak and miserable;" "crying all the time;" "cannot remember anything for ten minutes;" forgets the price of the goods in her husband's store; was "constantly mislaying needful articles, and making mistakes in making change." She was "very suspicious," fancied "that everybody was against her and talking about her," and confessed to being extremely jealous of her husband. In addition to these mental disturbances, she eructates large quantities of wind, is obstinately constive, has violent palpitations of the heart, and cannot go up one flight of stairs without getting out of breath. She often staggers, loses consciousness, and sometimes falls from vertigo; is annoyed by a persistent *globus hystericus*, and has no appetite whatever. The catamenia appear every three weeks, are abundant, but unaccompanied with pain. She has, however, a constant pain in the sacral and in the left infra-mammary region; also a frequent desire to pass water, and much "bearing down" of all the pelvic organs.

Without wearying you with every detail, in one word, the subjective symptoms of uterine disease which she presented were more numerous and more marked than I had ever before seen in one patient. In making a vaginal examination—to which she reluctantly submitted—I was struck with the excessive sensitiveness of her tissues, and with the uncontrollable excitement under which she labored,—symptoms hitherto in my experience limited to unmarried women addicted to self-abuse. I found the vagina crimson and hot, the womb tender to the touch, intensely congested, somewhat prolapsed, and in the first degree of retroflexion. The sound, passing through a patulous internal os, caused much pain at the fundus, and a slight hemorrhage upon its withdrawal. The *os tuncæ* was surrounded by a collar of erosion, and plugged with the characteristic glairy secretion. Finally, she flinched from any pressure, however light, over each ovarian region. The significance of these symptoms I explained to her, but I need not to you.

She then took me aside, and, unsolicited, told me her history. Being in straitened circumstances upon their arrival in this country, and withal anxious to lay by money, she and her husband had agreed to have no more children. With this view, she had submitted to the following fraudulent and one-sided expedient: at the height of the orgasm the husband withdraws from her person, and thus commits the crime for which Onan was punished with death. For six years such incomplete coitions had been practised, usually as often as five times, and never less frequently than three times, a week. She had at first attributed her ill health to change of climate, but quite recently had begun to suspect its true cause from an unexpected improvement in all her symptoms during the casual absence of her husband on business.

Prompted by this suspicion, she came to consult me as to its correctness, and actually, in case it was confirmed, to learn from me some other preventive method of congress. I explained to her the sinfulness of her conduct, and urged her to receive the approaches of her husband in a normal way, as otherwise nothing could be done for her. This, however, she flatly refused to do, saying she would much prefer a separation or even a divorce from him. Upon inquiry, I learned that her "husband was not the man he used to be;" that he was morose and dyspeptic, complaining much of general weakness and loss of appetite. Two weeks later, she came with much glee to say that by a mutual agreement this incomplete act of coition was in future to be limited to twice a week, and that she was now ready for treatment. Whereupon I refused to have anything more to do with her; and I have not seen her since.

You have heard, gentlemen, this sad history,—the history of a woman whose health is shattered, whose morals are perverted, whose mind is verging towards insanity. Now, what physical law of her being, what moral obligation, has been broken? Why has Nature been so resentful, and why these fierce reprisals? These are questions which press for an answer.

The sexual instinct has been given to man for the perpetuation of his species; but, in order to refine this gift and to set limits to its abuse, it has been wisely ordered that a purely intellectual quality—that of love—should find its most passionate expression in the gratification of this instinct. Dissociate the one from the other, and man sinks below the level of the brute. Destroy the reciprocity of the union, and marriage is no longer an equal partnership, but a sensual usurpation on the one side and a loathing submission on the other. Consider the moral effects of such shameful manœuvres: wedlock lapses into licentiousness; the wife is degraded into a mistress; love and affection change

into aversion and hate. Without suffering some penalty, man cannot disturb the conditions of his well-being or trespass beyond its limitations. Let him traverse her physical laws, and Nature exacts a forfeit: dare he violate his moral obligations, an offended Deity stands ready to avenge them. That this law is immutable, witness, from the history read to you, the estrangement between husband and wife; witness his ill health and ill temper, and the wreck of body and mind to which she has been reduced.

The husband suffers mentally, because no *man* can behave in so unmanly a way without a keen sense of self-abasement, without being stung by the chastisement of remorse. Dishonor the body, the temple of the soul, and you dishonor the soul. Again, by this cowardly recoil, his enjoyment in the act is so blunted that he is tempted to seek elsewhere for those pleasures which are denied him at home. Further, he suffers physically, because, although he passes through the crisis of the sexual act and completes it in that sense, yet, owing to his withdrawal from the person of his wife just before the moment of ejaculation, this acme of the orgasm, by the lack of the normal and necessary adjuvant—viz., the rugous and constricting vagina—is not sufficiently prolonged to wholly empty the *vasa deferentia*. Enough of the semen remains behind to tease his organs and to kindle in him desires too importunate to tolerate any great self-control. He is thus goaded on to such sexual excesses as no brain nor brawn can long support; for a constant drain on the life-giving fluid implies a constant expenditure of nerve-force. Early exhaustion and premature decrepitude will inevitably ensue if this practice of "conjugal onanism" is persisted in. Nor is this name a misnomer; for there is no essential difference between this habit and that of masturbation. Both injure in precisely the same way, and for precisely the same reasons. It does, indeed, seem to be the law of Nature that man must suffer the punishment of the onanist if he parts with the "seed of another life" in any other way than in that by which it tends to become fruitful.

The wife suffers the most, because she both sins and is sinned against. She sins, because she shirks those responsibilities for which she was created. She is sinned against, because she is defrauded of her rights. Lawful congress completely performed so far satisfies an imperious instinct, that attendant local congestions are at once relieved, and to great nervous excitement succeeds a calm repose of body and mind. On the other hand, conjugal onanism provokes in her desire which keenly solicit that very gratification which is denied by the nature of the act. The excessive stimulation of the whole reproductive apparatus remains unappeased. A nervous superexcitation continues which keeps up, as in our patient, a sexual excitement and a hyperæsthesia of the parts. By forfeiting her conjugal rights, she does not reach that timely conjunction which loosens the tension of the coercive muscles of her erectile tissues. Hence the congestive orgasm of the vagina, uterus, Fallopian tubes, and of the ovaries does not at once pass away, but persists for some time,—perhaps is not wholly effaced before another incomplete coition brings a fresh instalment. Thus arise engorgements, erosions, and displacements of the uterus, and inflammation of its appendages, accompanied, of course, by all those protean mental and physical manifestations which I have so often pointed out to you. She takes distorted views of life and of the marriage relation, and harbors resentment against her husband as the author of all her ills.

But we have not yet done with the train of evils. The uterine, ovarian, and vaginal plexus of veins insinuate freely with the hemorrhoidal vessels, and consequently with the *venæ portarum*. Hence the tur-

gescence of the one group of blood-vessels leads to engorgement of the other, and the persistent congestion of the intra-pelvic veins determines portal obstruction, and *vice versa*. The absence of valves in all these vessels, and the erectile structure of the reproductive organs, favor this turgescence. As a consequence, functional derangements of the liver are commonly associated with uterine disease. No gynaecologist has failed to observe the alternate relation of cause and effect between these two conditions. To this interdependence may we refer the obstinate costiveness, the vertigo, the loss of appetite, the dyspeptic melancholy, and the suspicious nature of our patient.

Again,—for the ill effects of such practices accumulate,—the very barrenness aimed at by these criminal expedients is in itself a source of disease. In sterile women the absence of pregnancy prevents a break in the constantly-recurring catamenia, and the physiological congestion of the womb by ceaseless repetition is liable to become pathological. Add to this the unrelieved congestions arising from incomplete intercourse, and a prolific source of uterine and hepatic disorders is at once manifest.

I have so lately warned you against the disorders arising from excessive coitus, even when normally performed, and more especially from that indulged in during the fatigue and discomforts of the honey-moon journey, so often the starting-point of uterine disease, that it is needless for me to recur to that subject. I wish, however, in this connection, to call your attention to another source of sexual trouble, for which your advice will be sought. Either from undue ardor on the part of the husband, or from the too frigid nature of the wife, the sexual crisis with him is over before hers is reached. Such misadventures are productive not only of unhappiness, but also of disease. Here, as in conjugal onanism, the female reproductive organs are kept in a state of congestion, which is followed by like ill results, the difference being only in degree and not in kind. For this lack of reciprocity—not, however, fatal to impregnation—you will counsel to the husband the practice of some self-denial as regards the frequency of congress, and greater self-control during the act, together with a recourse to such venial promptings as a warm and honorable affection may suggest.

But, to return from a digression, there are other artifices—nay, even equipments borrowed from the brothel,—for the purpose of avoiding conception, which may well alarm publicists and statesmen. For, vile as they are, they have received the open sanction of those English political economists who forget that crime and vice and human suffering in their land are due less to "over-population and large families" than to absenteeism, to the laws of primogeniture and entail, to the grasping avarice of the rich, and to the intemperance, ignorance, and shiftlessness of the poor.\* All these expedients operate by directly preventing the access of the spermatozoa to the uterine cavity, by destroying them, or by washing them away; but they are all hurtful equally to mind and to body. If it is hazardous for an overheated stomach to receive a glass of iced water,—its natural and accustomed beverage,—how much more will it be to deluge the over-congested womb with such foreign fluids as cold or astringent injections! On the other hand, those mechanical contrivances for limiting the range of the spermatozoa so blunt the pleasure as to lead to unfaithfulness or to their disuse. Moreover, in common with other teachers, I am old-fashioned enough to believe that pregnancy is a necessary condition to healthful

and happy marriages, and, further, that coition is innocuous only when complete in both husband and wife and when the germinal fluid bathes her reproductive organs. It is not always possible to trace the relation between cause and effect; some link in the chain of sequences often eludes our search. The *modus operandi* of many of our most common drugs is not known, and yet our confidence in them is not shaken, because the counterweight of our experience is greater. Therefore, for no other reason than that the common experience sanctions this postulate, I believe that the semen, aided of course by the general relaxation following the crisis, has a special property of allaying the congestive orgasm and the vascular turgescence of the venereal excitement.

For the limitation of families, some conscientious political economists recommend absolute abstinence. But, if the "nervous erethism" of long engagements is assigned by alienists as a common cause of insanity, and by physicians as a frequent source of uterine disturbance, what derangement of body and mind may not spring from this forced continence! Perhaps, however, we are wasting words on impossibilities. There is a wide-spread delusion, as old as the art of medicine itself, that intercourse after the tenth day following the cessation of the menses is not attended with the risk of impregnation. But ovulation is not necessarily menstruation; and he who constructs domestic time-tables or trusts to his almanac will find that accidents may happen in the best-regulated family.

There are, in fact, no harmless or available means for thwarting Nature's plain intention; for if they should not happen to injure the body, they assuredly will the mind. How immoral must be the effect when husband and wife meet, not "to endear each other,"—as Jeremy Taylor quaintly has it,—but to adjust accoutrements, to compound antidotes, and to consummate with pre-arranged precautions and cold-blooded calculations a union which for its perfect mental and physical fruition should be spontaneous and unrestrained! All these artifices soil the purity of thought, and degrade marriage into a carnal compact which regards alone the necessities of the flesh.

Such, then, are my views upon these so-called "misery checks" and "common-sense measures;" and I feel that they cannot be gainsaid. I dare any political economist to show me one innocuous expedient whereby conception may be avoided. I challenge him to name a single preventive plan which will not do damage either to good health or to good morals. Even natural sterility is a curse: show me a house without children, and, ten to one, you show me an abode dreary in its loneliness, disturbed by jealousy or estrangement, and distasteful from wayward caprice or unlovable eccentricity. Depend upon it, gentlemen, there are no thornless by-paths by which man can skulk from his moral and physical obligations; no safe stratagems by which he can balk God's first blessing and first command. Therefore, as hygienists, if not as moralists; as physicians, if not as patriots; as guardians of the public health, if not as philanthropists, I charge you to frown upon such practices and take a bold stand against them. Else, see to it that in the end you are not held to a strict account for the knowledge you have this day gained.

**TREATMENT OF PRURITUS VULVÆ.**—Those who have had any experience in the treatment of this troublesome affection will learn with interest that Mr. McGrath states (*The Canada Lancet*, November, 1871) that he has found the following, applied by means of a soft sponge after ablution morning and evening, attended with the most satisfactory and speedy result:—Biborate of soda,  $\frac{3}{2}$ j; hydrochlorate of morphia, gr. xx; hydrocyanic acid,  $\frac{3}{2}$ j; glycerine,  $\frac{1}{2}$ lb; distilled rose-water,  $\frac{1}{2}$ vj.

\* Besides the causes here enumerated, other unsuspected correlations undoubtedly exist, for Social Science has hardly yet reached to the dignity of a science. Thus far, it consists mainly of disjointed studies and isolated observations, which yet require the *junctura callida* of collation and generalization.

## ORIGINAL COMMUNICATIONS.

## SOME OBSERVATIONS CONCERNING THE DEVELOPMENT OF BLOOD-CORPUSCLES IN THE RED MARROW OF BONES.

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**A**PRIORI, what is more improbable than that the most highly organized elements of the blood, its red and white corpuscles, should have their origin in the marrow of bones, or, indeed, should have any connection whatever with that marrow except as subserving to its nutrition?

When Neumann and, later, Eales published the results of their observations on this point, the ground they occupied was so novel that I confess to have looked on them as deluded enthusiasts, and to have commenced a series of observations after them with the expectation of differing *toto caelo* from them in my conclusions. I had not proceeded far before becoming half convinced of the correctness of their views, and only a little farther, before being forced to look upon Neumann as a great discoverer in the domain of physiology, instead of as a deluded enthusiast.

I need scarcely say that my conclusions agree essentially with those of the German observers: entirely, indeed, as to the *place* of origin of the blood-corpuscles; partially, as to the *mode* of origin.

As the word "leucocyte" will be frequently called into requisition in the course of these remarks, it will be of advantage to state briefly my understanding of that word.

A leucocyte, then, is a granular cell, of which the ordinary diameter is  $\frac{3}{100}$  of an inch, but varying at times from  $\frac{3}{500}$  up to  $\frac{2}{100}$  of an inch, or even somewhat larger.

Its granular contents are cleared up by water, and more rapidly by acetic acid; when thus cleared, from one to several nuclei may be seen in its interior.

Such cells exist normally in the blood as its white corpuscles, and in the red marrow as the "myeloid cells" of Virchow, the "lymphoid cells" of Neumann; are sometimes found in oedematous connective tissue, and constitute the well-known pus-corpuscle, both as found on free epithelial surfaces and imbedded in the tissues. Occupying such diverse positions, and fulfilling such diverse functions in the economy both of health and disease, we are obliged to say that leucocytes with their specific form are destitute of a common specific nature. Let me state the idea more fully. Leucocytes of one class, as those of the blood, undoubtedly have specific characters, and enjoy those specific characters in common with all their fellows of the blood kind. Leucocytes of pus enjoy like intimate relations with all their fellows of the pus kind.

By the eye the two kinds are not distinguishable from each other; they have a form in common, the *specific form* of the leucocyte. But here their similarity ends; those of one kind do not perform, and probably are incapable of performing, the functions of those of the other kind; in other words, they have no *specific nature in common*. The same difference exists in the case of the leucocytic myeloid cells as regards their relations to pus-corpuscles, but in a less degree as regards their relations to the white blood-corpuscles.

Even if we accept Cohnheim's theory of suppuration, we can scarcely fail to believe that when the white blood-corpuscles have become pus-corpuscles by the act of passing out of the vessels they have, by this act, lost the power of ever again performing the functions of their original state. But pus is not always formed after Cohnheim's plan; for, passing over Virchow's plausi-

ble and attractive theory of rapid division of connective-tissue corpuscles, we all have seen, again and again, in the discharges from mucous surfaces, those gentle gradations making the transition imperceptible from perfect epithelial cells to perfect pus-corpuscles, as described by Virchow, Beale, and others. Thus we have found a leucocyte differing in *origin*, as well as in *function*, from the leucocyte seen in the blood as its white corpuscle, and yet the two are not distinguishable from each other microscopically.

Histologists are so generally agreed that the spleen and allied glands are instrumental in the production of white blood-corpuscles, and have such strong reasons for thinking the lymphatic glands active in the same office, that we have no intention of disputing this power in said organs.

Not alone in these glands, however, do white blood-corpuscles take their origin. The existence of leucocytes in red marrow has been recognized for years. Thus, Virchow, in his lectures on Cellular Pathology, delivered in 1858, says, "From marrow to perfectly fluid tissues is only a short step, and the boundaries separating marrow and pus cannot in many places be assigned with any degree of certainty." And, again, "The marrow of a *new-born* infant could at any time be passed off as a granulation both chemically and microscopically. Granulations are nothing more than a young, soft, mucous tissue, analogous to marrow. There is an inflammatory osteoporosis which, as has been correctly stated, merely depends upon an increased production of medullary spaces, so that the process which is quite normal in the interior of the medullary cavity is met with also more externally in the compact cortex. It (the osteoporosis) is distinguished from granulating peripheral caries only by its seat. If you go a step further, and suppose the cells, which, in osteoporosis, are present in moderately large numbers, to become more and more abundant; whilst the intercellular substance constantly becomes softer and diminishes in quantity, we have *pus*. The pus is here no special product, separable from the other products of proliferation and formation; it is not identical with the pre-existing tissue, but its origin can be directly traced back to the elements of the pre-existing tissue." Notice, first, that he speaks of the marrow of the *new-born* infant: in the infant all, or nearly all, the marrow is *red marrow*; in the adult only the marrow of the spongy bones remains red, that of the cylindrical marrow-cavities has become yellow and fatty. Notice, next, that he states in one place that the boundary between marrow and pus cannot be assigned with any certainty, and in another that pus-corpuscles are not identical with myeloid cells. Recognizing their frequent *identity of form*, he says they cannot be distinguished from each other; but, considering their wide difference of function, he plainly states that they are *not identical*.

The question necessarily rises as to how the blood-corpuscles which have their origin in the marrow may find their way into the vessels. Neumann supposes that the white corpuscles force themselves through the capillary walls by amoeboid movements: this he advances as theory only. Another view, also purely theoretical, may be advanced, viz., that in the blood-making marrow the vascular walls lose themselves in the formation of lacunae, like the lacunae of the spleen described by Mr. Gray. This suggestion has the advantage over Neumann's of making the entrance as easy for the red as for the white corpuscles.

Marrow being a connective tissue, and its cells, both when large and fatty and when in the form of leucocytes, being connective-tissue cells or corpuscles, those leucocytes which escape from it to become white blood-corpuscles, by virtue of their birthright are still con-

connective-tissue corpuscles. The red corpuscles have the same birthright and deserve the same name, although further removed from the original type than their white brethren. Hence, if the most tangible elements of the blood are connective-tissue corpuscles, we must class that fluid with the connective tissues, of course taking the word tissue in no strict sense. The softer connective tissues we know to be principally engaged in sustaining, in nourishing, in helping to reproduce those higher structures in which they are placed. It furnishes a pleasing analogy to view the blood as the softest and most nutrient connective tissue of all.

If blood be a connective tissue, then, whether we accept Virchow's or Cohnheim's theory of suppuration, the pus-corpuscle is still a connective-tissue corpuscle, only in one instance it has passed through the intermediate stage of white blood-corpuscle; in the other, it has not.

Next let us consider the place of origin of the *red corpuscles*. That these are not formed solely and at all times in the bones is proved by the fact that the blood of insects sometimes contains faintly-reddish corpuscles; and, again, that the first crop of corpuscles of all embryos is derived from the same mass of cells by which the heart and vessels are formed, and before the marrow, or even the bones, have made their appearance. Observe that the reddish corpuscle of the blood of insects differs in nothing except its reddish tinge from the white corpuscle. In other words, the white corpuscle has grown directly into the red.

My observations have been made on the marrow of the reptilia, of oviparous vertebrata, and of mammalia. The results will be stated first, and afterwards those points in which they differ from Neumann's views will be separately noticed.

In the observations on reptilia, ten in number, confined to frogs and toads, the following characters were found: First, a multitude of myeloid cells, some of which are of the size of ordinary leucocytes, while many are larger, up to double or triple that size. In these larger cells is often one nucleus agreeing in all its characters with a typical leucocyte, or there may be two, three, or many such nuclei; that is, myeloid cells multiplying by division of nucleus, and giving birth to a progeny of young myeloid cells, leucocytes. Evidently of this character are those cells mentioned by Virchow (Cellular Pathology, p. 346) in these words: "Recently, in the marrow of bones, especially in young children, cells have been observed where the entire structure is full of nuclei, which often attain the size of the whole cell." From the accompanying figure it becomes evident that by "attain the size of the whole cell" he means that the mass of nuclei completely fills the parent cell.

Second, a growth, or change, of myeloid cells (leucocytes) into oval, nucleated red corpuscles. This change, when traced through its several stages, as seen in one field in the cells of various appearance, is as follows: One of the larger leucocytes loses its granular aspect, becomes faintly colored, changes from round to oval, grows yet larger and more deeply colored, the cell-contents shrink from the cell-wall to form the nucleus, thus concentrating most of the color in the nucleus, and leaving the rest of the corpuscle comparatively transparent. At last is seen as perfect a red corpuscle as the first cell was a perfect leucocyte. The intermediate forms are perfectly comprehensible when viewed as a part of the series; but, isolated, they are incomprehensible and, as it were, hermaphrodite.

Third, the character of the nuclei of the red corpuscles demands notice, and this character was found, although in a less degree, in the blood generally as well as in that from the marrow. I refer to a marked granular condition of the nuclei, often existing of itself, and, when not thus existing, readily produced by the addi-

tion of dilute acetic acid,—a condition in which they very closely simulate leucocytes; in fact, so closely that, the enclosing corpuscle being destroyed, they are no longer distinguishable from the same,—a further proof of the non-specific character of leucocytes.

That the nuclei in the red corpuscles of marrow, and, to anticipate somewhat, their equivalents, the red corpuscles found in the myeloid cells of mammalia, are so often granular, shows the granular condition to be one indicative of youth and immaturity.

In this connection, the crenation and granulation of the red corpuscles in low fevers, especially typhus and relapsing, occur to me as caused in a way the reverse of that usually accepted, namely, that the mature blood-corpuscles are disorganized by the fever-poison; more in accordance with the above facts would it be to say that the fever-poison deranges the blood-producing tissues, and, as a result, the red corpuscles are sent from the laboratory imperfect, immature,—in other words, granular. The crenation wholly or in part, and also the granulation to some extent, are undoubtedly the result of physical causes, such as increased specific gravity of the serum, or its vitiation by retained secretions.

In one frog, shrivelling red corpuscles were found in the marrow. In another, both in the marrow and in the blood from other portions of the system, the nuclei of a good proportion of the red corpuscles were seen to have divided into two parts, one of which would appear in some instances as escaping from the corpuscle almost naked; or, again, the two halves of the nucleus would be seen dividing equally their containing corpuscle. This one case of self-multiplication of red corpuscles stands too much by itself to form a justifiable basis for even an opinion; it is simply given as it was observed. The most important facts above given are briefly these. In the marrow of reptiles, myeloid cells (leucocytes) multiply by division of nucleus; other myeloid cells (leucocytes) grow directly into red corpuscles.

Among the oviparous vertebrata only two examinations were made. One of these was of the head of the femur of a healthy chicken (full-grown); leucocytes were very abundant, and, besides perfect red corpuscles, others were found small and granular. The other was of the femur and the clavicle of a canary-bird which had died of a slow, wasting disease. Here were found many leucocytes and many proliferating myeloid cells; red corpuscles were very scarce.

To pass on to the mammalia. Six observations on the marrow of the spongy bones of the ox and dog, agreeing in their results, may be described together. Twice the marrow was fatty, and each time nothing was observed appearing to bear any part in blood-formation; nothing, in fact, but free oil-globules and cells containing large and small oil-globules. In the other four, myeloid cells, *i.e.* large and modified leucocytes, were seen to contain each a perfect, or a granular, red corpuscle. Notice that the myeloid cell contains a red corpuscle; not that which simulates a red corpuscle. For it not only possesses the proper color, but also presents the characteristic changes of aspect with changing focus. When the wall of the myeloid cell is broken by reagents, and the contained corpuscle has escaped, it is no longer distinguishable from its fellow red corpuscles.

In the head of the humerus of one gopher there was found an abundance of leucocytes, and a varying size for the red corpuscles. In the human species two examinations were made of the marrow of the fetus, in each instance at about the sixth month. In one, the myeloid cells were found to contain, individually, a red corpuscle, and the red corpuscles to vary in size. I hope I may not be misunderstood as meaning that more than a small proportion of *all* the myeloid cells showed any

signs of a contained red corpuscle; but those which did have any had one each. In the other fetus the above conditions were not noticed; but nucleated red corpuscles were found in the marrow, being absent from the blood of the rest of the body. The significance of this fact will be more advantageously considered further on. Only one adult man furnished specimens. These were an apparently healthy humerus and a carious ulna, amputated by Dr. A. J. Stone, and kindly sent me for examination. In the humerus, besides leucocytes and red corpuscles presenting no features of importance, masses of haematin, and fat-crystals stained wholly or in part with haematin, were found. In the carious ulna, as might have been anticipated, the blood pressed from its spongy structure gave no evidence of active changes.

In all these observations the abundance of myeloid cells, and the analogy between certain of these myeloid cells and the white corpuscles of the blood, render the production of the latter out of the former by a change of site and function a matter of great probability. The presence in the marrow of the reptilia of cells not typical of any fixed forms, and perfectly inexplicable except as transition-stages between leucocytes and red corpuscles, assures us of the formation of red corpuscles in this situation. This assurance is redoubled by the presence in the marrow of the mammalia of myeloid cells containing a typical red corpuscle. Again let me insist on this inclusion of red corpuscles by myeloid cells. The existence of nucleated red corpuscles in the marrow of the fetus after they have disappeared from the rest of the body likewise shows blood-changes going on in this situation. In the apparently healthy human arm-bone examined, many masses of haematin and some fat-crystals stained with haematin were found, but no collections of leucocytes or transitional forms. As in none of the observations on healthy bone anything was seen which would appear to indicate an active retrograde metamorphosis of the red corpuscles in this situation, if we may reason at all from one case, this one would seem to indicate a diminished formative force in the myeloid cells, which had allowed the material sent them for elaboration into higher forms to degenerate into lower. That the vitality of this humerus was not high is certain from the general worn-out appearance of the man, and the death, one by one, of many of the bones below it in the forearm and hand.

Before caries of a bone declares itself, we generally find the patient anaemic and feeble in a marked degree. Why? Perhaps because the marrow of the spongy bones all over the body has suffered a diminution of its vitality, which has limited its blood-making power, and at length in some bone whose powers of resistance are less than the others, the diminution of vital force passes beyond the abrogation of function and only rests at the death of the part. This view gains strength by the fact that some bones, or parts of bones, are peculiarly liable to caries in the different diatheses, and that such parts are those in which there is the most abundant accumulation of spongy structure containing the blood-making marrow. Of course the anaemia and debility found during the separation of the dead bone are largely produced by the irritation and drain attendant on that act.

By a reference to the papers of Neumann and Eales it will be seen that from their observations, made exclusively on mammals, principally rabbits, they consider the leucocyte to be transformed in its entirety into a red corpuscle. The former states this less distinctly than the latter, who elaborately runs through the description of a series of transitional forms, without, however, carrying the conviction that his series is a natural one, or that its members in all instances bear any relation to one another. That in reptiles the leucocytes of the red marrow, or myeloid cells, are converted entire into red corpuscles, all my observations go to prove;

but that in mammals the red corpuscles are formed *within* myeloid cells they go equally to prove. Therefore it will be seen that with the German observers I fully believe in the birth of red corpuscles in the marrow, but differ widely from them as to the *way* in which the leucocyte of mammals produces a red corpuscle; they holding that the whole leucocyte is transformed into the red corpuscle; I, that only a part is involved in the transformation. That Neumann saw the same forms as myself is proved by the fact that he compares them to forms found in the blood of frogs, and to the nucleated red corpuscles of embryos; but he does not seem to have grasped their true significance in the physiology of blood-corpuscle formation, nor to have realized their proper situation in the progression towards the highest form, the red non-nucleated corpuscle of mammals.

In tracing the transitions of blood-corpuscles, let us begin as low in the scale of organization as insects, in whose blood, ordinarily, nothing higher than leucocytes is found. These contain from one to several nuclei, which often resemble leucocytes except as to size. By this it would appear that the leucocytes of the blood of insects have the power of multiplying in the current of the circulation by division of nuclei. In common with other observers, I have occasionally seen leucocytes in the blood of insects which possessed a faint uniform reddish tinge. Ascending to the order of reptiles, we find in their blood not only leucocytes but also red corpuscles, large, oval, and nucleated. If we view the transitional forms met with in the marrow, we see such gentle gradations from an ordinary leucocyte up through larger leucocytes, and large leucocytes faintly colored and small homogeneous red cells, and larger red cells with contents condensing towards the centre, until finally the perfect nucleated red corpuscle is reached, that we find it impossible to say where the leucocyte has ended and the red corpuscle has begun. Here, as in the insect, the leucocytes have gained a reddish hue; but here, as in consonance with the higher organization, they have advanced beyond the mere condition of colored leucocytes. Here, too, the changes no longer take place in the circulation, but the leucocytes engaged in the process are myeloid cells; also the leucocytes of the circulating fluid have ceased to multiply, and rely for reinforcements on extraneous sources. Notwithstanding these differences, as in insects, the leucocyte gives origin to the red corpuscle by a transformation of its *entire* structure.

In the higher organism of mammals we find that myeloid cells (leucocytes), instead of growing into red corpuscles, give them origin within their walls, an endogenous formation. In this position the red corpuscle appears as the nucleus of its myeloid cell. Therefore, the perfect, non-nucleated red corpuscle of mammals having acted as nucleus to a leucocyte, and the nucleus of the reptilian red corpuscle standing in nuclear relations to that which was once a leucocyte, the mammalian red corpuscle is analogous to, if not identical with, the nucleus of the reptilian red corpuscle.

A human fetus was mentioned above in which nucleated red corpuscles were found in the marrow after they had disappeared from the rest of the blood. Why? The marrow may have contracted the habit, so to speak, of forming the nucleated red corpuscles of earlier foetal life, and, still clinging to that habit, forced the whole, or a part, of the present red corpuscles which should be non-nucleated, to pass through the nucleated form from which by simple rupture of the enclosing wall they might emerge as the perfect non-nucleated corpuscle. As will be seen, the above explanation, as to the part or the whole of a leucocyte being active in producing the red corpuscle, agrees partly with that given by Wharton Jones and Bennett, and partly with that given by Paget and others.

That little or nothing has been said of the so-called blood-making glands is not to be taken as evidence that their activity is disclaimed, except in so far as another source of supply necessarily lessens the demand upon them; and if that other source of supply be proved adequate to the demand, we may come to consider those glands as nearly or quite useless in that respect.

### DOUBTFUL CASES.

BY JOSEPH R. BECK, M.D.,

Fort Wayne, Ind.

I HAVE now on my case-book two cases of disease, exactly alike in every essential particular, and partaking of the nature of "doubtful cases" so much as to induce me to place them on record for the profession, in order to elicit any information concerning them which can be had; and if any one can contribute to my enlightenment, I shall feel very grateful therefor.

My first case came under my observation in February, 1867, and is described in my case-book as follows:

February 3, 1867, B. J., male, aged twenty-seven, unmarried, remarkably stout and healthy, but is somewhat troubled, as he phrases it, "about the condition of his waterworks."

He states that he had been keeping a mistress for nearly three years, and that he never had any difficulty until after cohabiting with her for the last time, two weeks ago, when he says he became convinced during the intercourse that something was wrong with the woman. He now presents himself with complete phymosis, accompanied by a most intense itching about the frenum of the prepuce. On examination I find that there is considerable induration in the cellular tissue situated between the skin and the mucous lining of the prepuce; but there is no sign of an ulceration anywhere, neither is there any discharge from the urethra, and he states that there has been none from the start. The itching is intense, and at times almost intolerable, but there is no evidence of the slightest congestion present anywhere.

I at once performed the operation of circumcision, and the wound healed up in the kindest manner inside two weeks' time, with the use of the cold-water dressing. There was nothing present after the operation to account for the excessive sensitiveness of the parts, and the itching symptom remains to this day a mystery to me. The slight loss of blood seemed to act beneficially, inasmuch as the itching disappeared within a few hours and never returned. Now comes the dénouement.

On the 10th of February, just seven days after being operated upon, my patient returned, complaining of a sore throat. A most careful examination failed to show distinctly and clearly a syphilitic throat, but upon looking at his body for any signs of eruption I found about twelve spots, crusts, upon the skin immediately over the sternum, and circumscribed by a line which, if drawn, would perfectly outline that bone. Fearing syphilis, yet not by any means positive of its existence, I placed him upon the protiodide of mercury in pill. He took this, in connection with an occasional dose of iodide of potassium, until the spots had completely disappeared, leaving not a trace. This had been effected by the 23d of the month, and in the mean time the sore throat had disappeared.

On the 23d, as stated, I saw him, and regarded him as cured. On the 1st of March he returned, complaining that he was losing his hair and beard, and that his finger- and toenails were coming off. I ordered him to cut his hair close, shave his face, and keep his nails cut short, but gave no medicine of any kind. By the middle of April he reported that his hair had stopped falling, that his beard was again growing luxuriantly, and that a new outgrowth of nail had nearly pushed the old ones from his fingers and toes.

He was at this time engaged to be married, and consulted me particularly with reference to the propriety and safety of

such a step. Declining an answer for a few weeks, I immediately communicated with a deservedly eminent authority in Philadelphia, detailing the case as here related, and asking his advice. (His letter has been mislaid, or it would be introduced here.) He seemed substantially to look upon the projected marriage as rather dangerous; and, acting upon this suggestion, I advised a postponement of marriage for one year at least. This was not agreed to, and the parties were married in September, 1867. J.—'s wife has borne him two healthy children, and he has never experienced the slightest trouble from the old affliction. I saw him last in June, 1871, and he was, if anything, stouter than ever.

I have been thus explicit in the statement of this case in order that the second one may be very brief; and, since the statement applies almost equally well to both, we shall thus avoid the tiresomeness of repetition.

I had, of course, never entirely ceased to speculate as to the probable cause of this trouble, but had permitted my mind to forget the circumstances somewhat, and, feeling that the case was to a certain extent an anomalous one, had ceased to think much more of it. It would, in all probability, have never seen the light but for the occurrence of a second case, precisely similar in the inception, progress, and decline of the attack. I again refer to my case-book for accurate data.

On the 20th of September, 1871, came Jacob G—, German by birth, laborer, unmarried, aged thirty years, stout and able-bodied, who stated that, while working in Chicago about two weeks ago, he cohabited with a prostitute, and within three days from the time of the intercourse he noticed a swelling of the prepuce, amounting to twice its volume, and accompanied by an intense itching. There was no pain, no discharge, no groin-trouble,—nothing, in fact, but the swelling and the itching. This latter symptom he described as being almost unendurable, and said that nothing gave him any relief. On examination I found the same indurated state of the prepuce as in the former case, and phymosis so complete that a medium silver probe was with difficulty passed.

I immediately circumcised him, and carefully examined the mucous membrane of the prepuce for any abrasion. This examination, although made by the aid of a magnifying-glass, failed to show the least thing wrong anywhere, not any evidence of congestion being present. The wound healed in due season, and the case presented successively the same train of symptoms that were noticed in the former one. (A description here is deemed unnecessary.) He was discharged, cured, on the 9th of November, 1871, after undergoing substantially the same treatment as the first case.

Now, these were cases of what disease? Certainly not gonorrhœa, nor any other purely local trouble. If syphilis, the symptoms developed in a remarkably short time, and without any chancres. Therefore they were probably not cases of syphilis. It certainly was in each case a constitutional trouble; else why the loss of the hair and nails? That there existed a specific poison, and that this poison simulated that of syphilis, there can be no doubt; but who ever heard of syphilis without chancres?

I have no theory to offer, but present the cases for record just as they are.

[Admitting that both the patients whose histories are given above were affected with syphilis,—and this seems to us the most probable view,—it is not impossible that the primary sore escaped detection because seated in the urethra. In other words, the disease in each case may have depended upon a concealed or urethral chancre.—ED.]

**CONIA MADE BY SYNTHESIS.**—M. Hugo Schiff has succeeded (*Bulletin Général*, October 30, 1871) in making a substance having many of the qualities of conia, by causing butyric aldehyde to react with ammoniacal alcohol (spirit of ammonia) at a temperature below the boiling-point.

## NOTES OF HOSPITAL PRACTICE.

## UNIVERSITY OF PENNSYLVANIA.

CLINIC FOR DISEASES OF THE SKIN.

SERVICE OF DR. LOUIS A. DUHRING.

Reported by Dr. ARTHUR VAN HARLINGEN.

## SEBORRHœA CAPITIS.

**T.** W., aged 60, English. The disease with which he is affected was formerly called pityriasis, signifying a branney or scaly disease; more recently it has been termed alopecia furfuracea, in consequence of the pearly scales which are thrown off by it. A better name is the one at present generally used,—seborrhœa, which is founded on the pathological feature of the affection, namely, the excessive secretion of sebum.

It frequently happens that the individual affected with this complaint is entirely unaware that he is suffering from a disease of the scalp until his hair begins to fall out.

Such was the case with this patient, who has suffered probably for years with seborrhœa and falling of the hair, without attempting to have the disease remedied, and, indeed, unaware that he was affected by any serious ailment.

An examination of the head will show that the scalp is covered with fine branney and pearly scales, in some places imbricated, in others loose, and most abundant over the parietal region on either side. In the young, itching is the most prominent symptom; while in those who are older, falling out of the hair is often the sign most noticed.

Seborrhœa, pathologically considered, consists of a vitiated condition of the sebaceous follicles, causing them to pour out an increased quantity of their peculiar secretion. This, mingled with epidermic scales, becomes deposited upon the surface in pearly laminae, as in the case of the patient you have just seen. Seborrhœa is not confined to the scalp, but is found also on the forehead, back, genitalia, and other localities. When occurring upon the body its treatment is somewhat different. At present I shall speak only of seborrhœa capitis.

The first thing to be done in these cases is to remove the masses of desiccated sebum and epidermis. This is accomplished by saturating the hair with olive oil, retaining it on the head overnight, and then washing thoroughly with the following:

R Saponis viridis, 5*iv*;  
Alcoholis,  $\frac{3}{2}$ *j*. Misce.

This preparation is known as spiritus saponis kalinus.

As the amount of secretion on this man's head is not great, we will dispense with the use of oil in his case, and simply direct him to apply the spirit in the following manner. He is to take a small flannel rag, wring it out in hot water, and pour upon it about a teaspoonful of the spirit, which he will rub into his head, adding a small quantity of warm water from time to time, so as to form a lather. This "shampooing" process is to be continued for ten minutes, when the head may be washed with pure water and thoroughly dried.

The application as just directed is to be made morning and evening, and may have to be continued for some time. When the scales have been entirely removed, we shall order some such mixture as the following oil:

R Acid. carbolici, 3*ss*;  
Ol. ricini,  
Alcoholis,  $\frac{3}{2}$ *j*. Misce.

Sig.—Apply after washing.

The object of this application is to relieve the dryness and contraction of the skin and hairs resulting from the use of the spiritus saponis kalinus.

## ECZEMA RUBRUM.

**M. A. C.**, Irish, domestic, aged 45. We have here one of the most common of skin-diseases. The case before us has not yet been put under treatment, and shows well the appearance of a mild form of this variety of eczema, accompanied by weeping or running. The disease is more common among women than among men, and occurs most frequently in persons above middle age. When it presents itself on the leg, it is very apt to be connected with varicose veins. None appear to exist here. In the present instance the disease is

dependent on the state of the patient's health, which is far from good.

The treatment will be twofold. The internal remedies we shall use are iron and cod-liver oil, together with a generous diet. As regards external applications, we may make use of a mixture of olive oil and lime-water, applied twice daily after thoroughly washing the part; or we may employ the treatment I usually adopt, which consists in thoroughly rubbing the diseased portion of the skin with *sapo viridis*, and, after washing this off, applying *unguentum diachyli* thickly spread on strips of linen. When unaccompanied by varicose veins, this form of eczema is curable when proper treatment is employed.

## ECZEMA PALMARIS ET PLANTARIS.

**J. A.**, aged 50, porter. This eruption, the patient states, is of about one year's duration. You see that it involves the palm of each hand, and that it is scaly, with a tendency to fissure and bleed. The eruption, as usual in these cases, involves the feet as well as the hands; and sometimes it happens that when the former are better the latter are worse, and vice versa. Such is the case in the patient before us. When chronic, the severity of the symptoms varies greatly with the seasons, the rule being that this form of eczema is worse in winter than in summer. The tendency to fissure gives rise to great pain, occurring as it does at points where the motion of the skin is most constant, and where it is most exposed to stretching and rubbing.

It is important to arrive at the diagnosis of these cases from actual inspection and examination. This is the most essential thing to learn in the study of cutaneous diseases, being of far greater consequence than the treatment. It is an art arrived at only by close study of the appearances which the skin itself presents. There is a syphilitic form of disease of the hands and feet, often incorrectly termed syphilitic pruritis, which resembles in many respects the affection before us. The appearances, together with the itching which is quite prominent in the case before you, are sufficient to enable us to determine that the disease is in no way connected with syphilis. In fact, we have here a case of eczema squamosum; and a peculiarity of this variety is that it scarcely ever forms vesicles, nor is it attended with the weeping or oozing of viscid fluid. The skin cracks open in places, and shows beneath the red surface of the corium, but no moisture.

This man was ordered, a day or two since, the following:

R Picis,  $\frac{3}{2}$ *j*;  
Adipis,  $\frac{3}{2}$ *j*.

Misce, et *ft.* unguent.

Sig.—Apply morning and evening after washing.

The relief produced by this application has been decided, and we shall continue it for the present.

## HERPES IRIS.

The affection before us is quite a rare one. It usually occurs during the spring or autumn, and the present case is somewhat exceptional in this respect. We have here vesicles, not like those of eczema, but larger, and resembling rather the eruption of herpes zoster and herpes labialis, to which class of diseases the one before us belongs. The name given to this affection, herpes iris, refers to the mode of its occurrence, in concentric rings spreading from the original point of eruption; also with reference to the shades of color which it shows at times. It should not be confounded with herpes circinatus (*tinea circinata*), which is of parasitic origin. The affection runs an acute course, commencing usually with a slight febrile attack, and lasting several weeks. The eruption is apt to appear in successive crops of large distinct vesicles on an inflamed base, running a course similar to that of herpes zoster.

The patient has been annoyed off and on with the disease for the last nine years; and, contrary to its usual custom, it has occurred with him in summer and midwinter. The rest of the year he is quite free from anything of the kind. This affection is not usually a troublesome one; and I question if this man would have sought relief had not the eruption appeared on his hands and disabled him from work.

The disease is spontaneously curable. Under ordinary circumstances, some tonic aperient may be used as a preventive against successive crops appearing.

## EPISCOPAL HOSPITAL.

SERVICE OF JOHN H. PACKARD, M.D.

Reported by DR. WILLIAM H. BENNETT, Clinical Clerk.

## FRACTURE OF LEG IN A PREGNANT WOMAN—PERFECT CURE.

M., a healthy, well-built woman, forty years of age, was admitted July 4, 1871. The day before, being at the time seven and a half months gone in pregnancy, she was walking, with a child in her arms, over an uneven lot made slippery by the rain, when she slipped and fell, her foot turning under her. After her admission, ether was administered, the fracture reduced, and the leg placed in a fracture-box.

For a few days an evaporating dressing of lead-water and laudanum was applied to the part. About the fifth day after the accident the fracture-box was suspended by means of a frame, and the patient allowed to sit up in her bed.

At the end of the tenth day there was evident union of the fragments, and they were in good position. At the end of the fifth week the leg was removed from the fracture-box, and pasteboard splints were applied. The union was now firm and the position of the fragments excellent. A few days afterwards the patient was encouraged to walk, at first with assistance and then without it. She was discharged, with a sound leg almost entirely free from deformity, on the 15th of August. On the evening of the 17th she gave birth to a healthy boy, after a labor which, according to her own account, was easier than her former ones.

This case goes to prove the correctness of the accepted view that pregnancy exerts no special influence on the union of fractures, unless by reason of the debility induced by some of the various incidental associations with it. (See Malgaigne, *Traité des Fractures, etc.*, tome I, p. 141; American translation, p. 123.)

## COMPOUND FRACTURE OF LEG TREATED BY SUSPENSION IN THE FRACTURE-BOX—RECOVERY.

W. G., a young man, twenty-three years of age, previously in good health, and of temperate habits, was admitted July 15, with a compound fracture of both bones of the right leg, which had been caught between the bumpers of two coal-cars. The tibia was broken near the junction of its lower and middle thirds, very obliquely. Two wounds—one on the inner and the other on the outer side of the limb, each large enough to admit the little finger—communicated with the fracture.

Owing to the degree of obliquity of the fracture of the tibia, it was impossible to prevent a slight projection forwards of the upper fragment. The leg was placed in a fracture-box and surrounded with bran. The external wounds soon scabbed over, and although during the first month they were twice opened accidentally, giving exit to a slight discharge, yet the fracture practically resolved itself into a simple one. At the end of the first week, suspension of the fracture-box was employed. In order to facilitate the dressing in this position, the iron framework was used, which allowed the box to be opened and the dressing accomplished without lowering the limb or in any way interfering with the suspensory apparatus. The patient had not a single unfavorable symptom; on the 24th of August the external wounds were healed, and the bony union was sufficiently firm to allow the limb to be removed from the fracture-box and pasteboard splints to be applied. He was discharged, cured, September 22, having been sixty-nine days under treatment. There was a little prominence of the upper fragment, and slight shortening.

## COMPOUND FRACTURE OF LEG, NECESSITATING AMPUTATION—RECOVERY.

M. L., at twenty-four years, a young man of good health and habits, was admitted July 22, 1871, with a compound comminuted fracture of both bones of left leg. While driving a horse attached to a coal-car, his foot was caught in the track, and to avoid severer injury he lay down with his leg across the rail. The wheel passed over it just above the ankle, almost severing the foot. When admitted he was suffering much from shock, but soon reacted. Ether was administered, and amputation performed about the middle of the leg by a double-flap operation. He promptly reacted, and did well,

Owing to the contused condition of the parts, the flaps sloughed, but the wound rapidly filled with healthy granulations, which covered in the bone. The ligatures came away promptly and without trouble. On August 5 (fourteen days after the operation) the sloughing of the posterior flap caused a small cutaneous arterial branch to give way, but the resulting hemorrhage was readily stopped by applying a compress covered with powdered alum. A second hemorrhage occurred from near the same spot about four hours afterwards, but was checked with equal facility, the patient losing in all about eight ounces of blood. From this time onward the progress of the case was an uninterrupted convalescence. By the 15th of August there remained simply a healthy ulcer, and the patient was able to ride about in a chair. He was discharged September 19, with a spot about the size of a dime still unhealed.

## WILLS OPHTHALMIC HOSPITAL.

SERVICE OF GEORGE C. HARLAN, M.D.

Reported by CHARLES K. MILLS, M.D.

## DESCENDING NEURITIS.

H. Y., at 38, a widow, having no children, previously in good health, ten days before admission had a violent pain in the top of the head, and was troubled with nausea. The next day the headache was more intense, but felt most over the left brow. The sight of the left eye was dim, and there were "stars flashing before it." The dimness of vision continued to increase up to the time of her admission to the hospital, November 11, 1871, when it was reduced to merely quantitative perception of light: she could not count fingers held close before the eye. The headache and nausea continued. The external appearance of the eye was in all respects normal, except slight dilatation and sluggishness of the pupil. Vision in the right eye was normal.

By ophthalmoscopic examination of the left eye, the disk was found to be congested, and slightly swollen, and its margins indistinct. The central veins were enlarged. The retina appeared quite normal, except a haze immediately around the disk.

She was put to bed in a darkened room, footbaths were ordered, the artificial leech was applied to the temple and the application repeated several days in succession, morphia was injected subcutaneously into the temple for the relief of the intense frontal pain, and half a grain of calomel was given every two hours. When slight salivation was produced, the calomel was discontinued, and iodide of potassium was ordered, 3ss a day. The eye was kept constantly under the influence of a strong solution of atropine, applied several times daily.

A slight improvement was noticed the second day after admission, and she continued steadily to get better until the time of her discharge, December 9, when she could read with ease No. XXX. of Snellen's type at twenty feet, and the ophthalmoscopic appearances were nearly normal.

Four days after her discharge, December 13, she came to the hospital dispensary on account of her right eye. She had had slight headache for three days; but for the last two days the headache had been severe, and accompanied by nausea and "flashing of red and blue stars before the eye." Her vision in this eye was still  $\frac{2}{20}$ , but the letters appeared slightly less distinct and clear than before.

She was readmitted to the hospital, but was not prepared to come in until the next day, December 14, when she complained of having had violent pain in the head and eye during the night previous, and was still suffering considerably. In twenty-four hours the vision had diminished from  $\frac{2}{20}$  to  $\frac{1}{20}$ . She could distinguish colors readily. Ophthalmoscopic examination revealed much the same appearances as had been found in the other eye when she first came for treatment. Her gums were still spongy from the effects of the calomel, and she was still taking iodide of potassium.

The same treatment as before was ordered, except that the mercurial vapor bath was substituted for the internal admin-

istration of calomel, and bark was given. Her diet consisted, as previously, of beef-tea and milk.

December 18.—She still had much pain in the eye and head, and slight nausea, and her bowels were constipated. Vision was entirely gone; there was no perception even of the bright light reflected from the ophthalmoscopic mirror. The disk was more congested and edematous, its inner margin scarcely discernible. Mercurial inunction was now substituted for the vapor-bath, and she was ordered a mercurial purge, and a blister to the nape of the neck.

December 20.—She could count fingers with some difficulty. She began to distinguish light on the 19th. No very decided changes in the ophthalmoscopic appearances could be discovered.

January 8, 1872.—Vision had improved gradually, and she could read No. LXX. Snellen at ten feet. She is still under treatment.

Dr. Harlan considered the pathology of this case obscure. A careful examination of the urine revealed nothing abnormal. She had not menstruated at all for two years, although prior to that time she had always been perfectly regular. At the period for the return of the catamenia she had experienced slight nausea and discomfort only. No syphilitic taint could be traced in the present symptoms, or in the patient's history; but the apparent response to "antisyphilitic" treatment pointed in that direction. The absence of color-blindness, on the other hand, was opposed to this view, as it is thought to be rarely, if ever, wanting in syphilitic disease of the nerve or retina. Galenowski, particularly, in a recent article in the *Archives Générales*, lays great stress on this symptom. It could only be determined that the disease of the nerves originated within the cranium, and descended towards the retina, which remained unaffected except immediately around the disk.

#### TWO CASES OF PUNCTURED WOUND OF THE EYEBALL.

J. Y., at. 21, a stone-cutter, was struck in the eye with a small piece of steel from a chisel. He came for treatment twenty-four hours after the injury, when it was discovered that the steel had penetrated the cornea and lodged in the lower and outer part of the iris.

A segment of the iris containing the foreign body was removed. Ice cloths were applied and rest enjoined. The eye did well until the night of the second day, during which it was attacked with violent pain, and the next morning the anterior chamber was found filled with blood, and vision lost. A strong solution of sulphate of atropia was used in the eye, and the artificial leech applied to the temple.

The blood was rapidly absorbed, but when, three days afterwards, it had disappeared, another hemorrhage occurred. The treatment above given was repeated, and in two weeks he was able to leave the hospital. He attended the dispensary service for three weeks after the iridectomy, when the conjunctiva was but slightly injected, all the media were clear, and he had a vision of  $\frac{20}{30}$  with the stenopaeic apparatus. He was directed to return to the hospital, but has not been seen for four weeks.

G. C., at. 15, was struck in the left eye with a shoemaker's awl, which penetrated the upper and inner part of the eyeball at the sclero-corneal juncture, and passed through the iris about halfway between its pupillary and attached circumferences. The instrument was immediately withdrawn; the patient, experiencing little trouble, did not come for treatment until two days after the reception of the injury.

His vision was found to be normal. No iritis or conjunctivitis had ensued; there was no prolapse, but apparently a slight adhesion of the iris to the anterior capsule at the point of penetration, causing a decided distortion of the pupil, which was pyriform in shape. The lens was uninjured. He was treated by the instillation of an eight-grain solution of sulphate of atropia, and in a week the pupil was nearly regular, vision still normal, and no bad symptoms of any kind had supervened.

INJECTION OF ALCOHOL INTO SEROUS CYSTS.—M. Monod (*L'Union Médicale*, October 30, 1871) has called the attention of the Société de Chirurgie to the use of alcohol as an injection in hydrocele and in other forms of serous accumulation.

THE ORIGIN OF FIBRIN.—P. Mantegazza (*Centralblatt*, No. 45), for the purpose of deciding some points in dispute in regard to the composition of the blood of the splenic vein, performed several experiments on dogs. In the majority of the experiments the blood of the splenic vein was found to contain more fibrin and fewer corpuscles than that of the jugular vein; but in almost as many instances the proportions of these substances were reversed, or the composition of the blood of the two veins was exactly the same. The spleens of three rabbits were excised; but the operation seemed to have no perceptible influence upon the amount of fibrin in the blood. The injection of a solution of urea into the blood of rabbits and of dogs was followed by the disintegration of a large number of blood-corpuscles, and, if the animal survived for some days after the operation, by a marked increase in the amount of fibrin,—in one case nineteen parts in a thousand. Lactic acid was also injected into the blood of several animals. Its effects varied according to the amount injected and the concentration of the solution. They were also not the same when it was introduced into the peritoneal cavity as when it was injected into the veins. In the former case, peritonitis and entero-colitis were the local results; and these may prove fatal. In both cases, congestion and inflammation of the lungs, inflammation of the kidneys, and haematuria, as well as reddening and swelling of the endocardium, were produced. In the case of a dog, symptoms of articular rheumatism, with endocarditis and fever, were observed. Valvular lesions were never noticed. The blood-corpuscles were diminished and the fibrin increased. In the blood of animals poisoned by lactic acid, clear bodies of different sizes, presenting in some cases a diameter of  $1\text{ mm}.$ , were seen. They were semi-transparent, and were composed of fibrin and white blood-corpuscles. It is not improbable that these give rise to embolism, and, consequently, to inflammation of the lungs. Mantegazza has not observed any increase in the amount of fibrin in the blood of animals to which the induced current has been applied or in which convulsions have been induced. The examination of the blood of persons who have died of tetanus has yielded the same result; and while in some cases the blood of parts subjected to violent movements has been found to show an increase of fibrin, in others it has contained less fibrin than the blood of parts at rest.

Mantegazza is of the opinion that the coagulation of the blood and of the coagulable fluids depends upon a condition of irritation of the white blood-corpuscles, which, when in contact with foreign bodies or inflamed tissues, or when removed from their physiological influences, emit a substance which is either fibrin or is the substance from which fibrin is formed. The red blood-corpuscles are not at all necessary to the formation of fibrin. Lymph and inflammatory serous effusions which do not contain them are capable of coagulation; but every coagulable liquid must contain the white blood-corpuscles, and will not coagulate when these are mechanically removed. Sussana attributes the relatively greater amount of fibrin in the arterial blood than in the venous to the fact that just before the venous blood enters the heart it receives from the thoracic duct a large number of colorless blood-corpuscles. In many conditions where an increase in the amount of fibrin is observed (pregnancy, digestion, the blood of the splenic vein), an excess of the white corpuscles may also be detected. And wherever in inflammation the white corpuscles accumulate, there fibrin will also be found.

CHLORAL IN TETANUS.—M. Garnier (*L'Union Médicale*, November 14, 1871) refers to several cases in which chloral was used in the treatment of tetanus occurring in very young persons, and says that it is in such patients that it will be found most useful. In a child thirteen years of age four grammes of chloral were given at a dose, with the effect of producing a marked amelioration of all the symptoms. A complete cure was effected on the thirty-fifth day, after one hundred and eighty grammes had been taken. In a child aged seven days, affected with trismus, chloral was dissolved in the milk of the mother, and injected into the child's nose during the paroxysms. Twenty-five grammes were thus administered, and on the ninth day the cure was complete.

CAMPHOR IN PHAGEDENIC CHANCER.—M. Baudouin reports (*Gaz. des Hôp.*, Sept. 16, 1871) three cases of this disease successfully treated by the application of camphor in powder.

PHILADELPHIA  
**MEDICAL TIMES.**  
 A SEMI-MONTHLY JOURNAL OF  
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THURSDAY, FEBRUARY 1, 1872.

**EDITORIAL.**

**NURSING IN HOSPITALS.**

THE recent numbers of the London *Lancet* contain a series of articles on the subject of night-nursing in the London hospitals, which we cannot but regret are not likely to be so generally read as they deserve to be by all those who are interested in hospital management in this country. The information which is conveyed through the pages of the *Lancet* was obtained by making night visits to the various London hospitals and workhouses between the hours of 9 P.M. and 2 A.M., the officers of the institution being in no case apprised of the exact time of the visit. It has always struck us that too much was expected of the nurses of the hospitals in this city, and that this was especially true of those on night duty; and this impression has been confirmed by the facts contained in the papers alluded to. It would be impossible to reproduce them in full in this journal, and we must, therefore, content ourselves with making a few abstracts from them. Taking, for instance, the last *Lancet* which has come to hand, we find accounts of night visits to the Marylebone Workhouse, St. Mary's Hospital, St. George's Hospital, Westminster Hospital, and University College Hospital. We shall for the present omit any reference to the Marylebone workhouse. The St. Mary's Hospital contains one hundred and sixty beds, and the nursing staff numbers twenty-five persons. There are seven Sisters, eleven day nurses, and seven night nurses. At the St. George's Hospital, where there are three hundred and fifty-three beds, the nursing staff numbers seventy persons. There are thirteen head-nurses, twenty-four assistant-nurses, twenty-one night nurses, and ten probationers. The Westminster Hospital contains about two hundred beds. The nursing staff consists of the matron, six Sisters, and sixteen nurses, seven of whom are night nurses, so that each nurse has the charge, on an average, of thirty patients; but for cases requiring extra attention special nurses are provided. The University College Hospital contains one hundred and fifty beds, and the nursing staff consists of a Sister Superior, who has entire control, and is assisted by five Sisters and twenty-three nurses and probationers. There are eleven nurses on night duty.

No hospital in Philadelphia is provided with so large a nursing staff as are these London hospitals, in propor-

tion to the average number of its inmates; but the disproportion is especially noticeable in the number of nurses on night duty. In most, if not all, of the hospitals of this city not only is a much larger number of patients under the care of one night nurse, but he is frequently compelled to leave one ward to the care of a convalescent patient while he visits another in a different story or, it may be, in a different building. The head day nurses sleep, however, in a room adjoining the ward of which they have charge, and are required to assist whenever a case of recent accident is admitted to the hospital or whenever an emergency arises.

Unquestionably, the high price which labor commands in this country renders it impossible for any hospital to have so full an equipment of nurses as is usual in England, especially since the nursing of male patients in American hospitals is done almost exclusively by men. If it were possible to substitute female for the male nurses, the nursing staff of a hospital might be very much increased without adding to its expenses, since the former do not receive as much wages as the latter; but there is now much greater difficulty in procuring good and reliable nurses for the women's wards than for the men's, and this difficulty would, of course, be very much augmented by anything which would lead to an increased demand for female nurses. It is perhaps one of the most deplorable results of our social system that no woman who looks forward to the possibility of marrying can be induced to adopt any occupation as a profession for life, and, of course, young women who can gain their livelihood in other ways are not likely to take to nursing. Consequently, the women who seek positions as nurses are generally advanced in life, and are very frequently widows, who take them simply because they are qualified for nothing else.

The Nurses' Home in this city affords, it is true, an opportunity for women to become familiar with the duties of the lying-in room; but women who can earn from nine to ten dollars a week are not likely to become hospital nurses. These must therefore be recruited from a class little above that which does the rough work of our households; but it is certainly desirable that they too should have some preliminary training. Is it not possible, however, to interest ladies of refinement and education in the care of the sick, and to induce them to take positions as superintendents of the ordinary nurses? The establishment of nursing sisterhoods seemed to indicate at one time that there was a probability that this might take place; but experience has demonstrated that other qualities than religious fervor are needed in a nurse, and that a woman who is admirably qualified to instruct the ignorant in the principles of our faith may be woefully inefficient, if not positively neglectful, as regards everything connected with the physical well-being of the patients committed to her care; and we have no hesitation in saying that it would be better for the lady superintendents not to be connected with any religious organization. In England the introduction into some of the hospitals of a

large number of Sisters, who are independent of the hospital and are not amenable to its rules, has been the occasion of a good deal of trouble; and it would give rise to many disagreeable complications here. In one of the hospitals of the city the ladies connected with a religious institution have often rendered valuable services simply from Christian love to their neighbors, but some of them have occasionally allowed their zeal to get the better of their discretion in their endeavors to rescue a brand from the burning.

There are other matters in hospital management in which we think the hospitals of this country inferior to those of England; but we leave these for some future occasion.

### LEADING ARTICLES.

#### A FEW WORDS ABOUT HOMEOPATHY.

**A**MONG the laity, an impression very generally prevails that the objection of the "old school" to homeopathy is mere prejudice, and that we are only prevented by an absurd punctilio from consulting with those who practise it; and such is really the case, unless we know what the doctrines are which we decline to recognize. We do not hesitate to say that the profession should, one and all, be well acquainted with this system of quackery,—its apparently strong points, and its really weak ones.

We have no fear that familiarity with the groundwork and the current literature of homeopathy will be a source of danger to any well-educated or honest practitioner of regular medicine. At the present day, after more than thirty years, a profession composed of a large body of men of more than average education, ever in eager search for new light upon the causes of human suffering and the remedies therefor, have utterly failed to find in homeopathy anything to aid them in their battle with disease. Not one man of note in our ranks has come out and announced himself as either in whole or in part a convert to that doctrine. Not one physicist of eminence has ever given in his adhesion to its principles, or recognized it as the offspring of true science. Not one theory or fact, directly or indirectly developed by homeopathy, has worked its way into acceptance either by men of general science or by those devoted to medicine especially.

We cannot consult with homeopaths, because we have no common ground upon which to meet them in the discussion of medical matters. Our code of ethics most justly prohibits us from consultation with all those "whose practice is based upon an exclusive dogma, to the rejection of the accumulated experience of the profession, and of the aids actually furnished by anatomy, physiology, pathology, and organic chemistry." No medical society can be compelled to admit them as members, nor can any legal penalty be enforced against those who decline to recognize and consult with them (as has recently been attempted in Massachusetts),\*

except under laws so absurd as to work their own abrogation.

Homeopaths themselves—unless they are grievously slandered by report—in desperate cases turn their backs upon their dogma, abandon their infinitesimal doses, their triturations and potencies, and resort to practice which would be "heroic" if it were not too often reckless and hurtful.

We say, again, that not only honesty but interest would induce us—would compel us—to adopt whatever of truth there was in homeopathy, if it contained such an element. We assert that it cannot stand the test of impartial scientific scrutiny, and that its continued existence is owing to the fact that before its patrons such test can never be applied. It can, however, be done by every member of the profession for himself, so that he may be, instead of an ignorant and bigoted opponent, an intelligent and candid judge, of a system of quackery whose semblance of science alone raises it above other forms of charlatanism.

### CORRESPONDENCE.

#### PHYSIOLOGICAL ACTION OF PUTTY.

TO THE EDITOR OF THE PHILADELPHIA MEDICAL TIMES.  
**H**AVING never seen a case similar to the one subjoined, I send you the following brief notes:

F. D., at 16 months, was troubled during October with constipation and acute strangury, making frequent attempts to void water, attended with much pain and screaming. There was no fever, the pulse was natural, tongue a little red, and the gums swollen from the imminent eruption of several teeth. On inquiry, I could find no history of previous ill health, nor had the child been troubled with worms. The symptoms being, however, suggestive of ascarides, and the child's diet very miscellaneous, including many indigestible articles, I concluded that it was a case of intestinal irritation. I administered calomel and santonin, and, the child's bowels having been opened, it became well at once; no ascarides having been voided. In the course of a few days the same train of symptoms reappeared, and continued for several days, when the same treatment was resorted to with temporary success. I then examined the child's urine, which was scanty, rather high-colored, and contained no albumen or casts, but a considerable number of very small oil-globules. On continuing the investigation, I found that the father, a painter and glazier, had for several weeks been working occasionally in the room where the child was, and had been using putty. As this was not his custom, he was able to inform me that these attacks had only followed the use of the putty, which the child had been allowed to handle and even encouraged to put in his mouth; the child had also been known to eat it. The whiting of which putty is in part composed would account for the constipation; the linseed oil, its other ingredient, gave clinical proof of its ability to cause the strangury, being also found in the urine; and, finally, the apparent cause having been removed, the child completely recovered, and is at the date of writing remarkably plump and healthy.

H. G. LANDIS, M.D.

\* See the *Philadelphia Medical Times* for Dec. 15, 1871.

## RUY SCH'S ANATOMICAL CABINETS.

TO THE EDITOR OF THE PHILADELPHIA MEDICAL TIMES.

DEAR SIR,—So many conflicting statements have been made by authors as to the condition of the celebrated preparations of Ruy Sch that I am glad to be able to give the following authentic statement as a contribution to their history.

Ruy Sch collected two museums. The first was bought in 1717 by Peter the Great for 30,000 florins, and sent to St. Petersburg; the second was purchased after his death, in 1731, for 20,000 florins, either by the King of Poland or the Elector of Saxony. The general statement is that his preparations exist in perfect preservation to the present time (Bayle et Thillaye, ii. 85; Parsons' Anat. Prep., Preface, p. v.). Hyrtl has examined the preparations of the second museum at Leyden, Greifswald, and Prague, and found them worthless (Zerglied., pp. 592-3). The only question, therefore, was as to the Russian collection; and of this neither he nor any other author speaks from personal knowledge.

Desiring, therefore, to ascertain its condition, I addressed a note to Hon. A. G. Curtin, our Minister at St. Petersburg, and have received the following courteous reply:

"LEGATION OF THE UNITED STATES,  
ST. PETERSBURG, Dec. 10, 1871.

"MY DEAR SIR,—In answer to your letter to Mr. Curtin of Sept. 20 about the anatomical cabinet of Ruy Sch, I have the honor to inform you that Ruy Sch's cabinet now forms part of the Anatomical Museum of the Imperial Academy of Sciences, and is in a good state of preservation. The greater part of the curiosities and library of Peter the Great were passed over to the Academy.

"I have delayed writing because I was promised a little book which contained some details on the subject; but so far I have not received it.

"I am, sir, very truly,  
"Your obedient servant,  
"EUGENE SCHUYLER."

I hope soon to obtain the volume referred to, and if it contains any items of interest I will give them to the readers of the *Times*.

Yours truly,  
W. W. KEEN, M.D.

PHILADELPHIA, January 3, 1872.

## ABSTRACTS.

BY ROBERT STONE, M.D.,  
Irvington, N.Y.

ON HEMORRHAGE FROM THE KIDNEYS IN INFANCY AS A CONSEQUENCE OF DISEASE OF THE INTESTINAL CANAL.—In connection with the observation of Beckmann, that after severe diarrhoea in the first two months of life there are frequently found thrombosis of the renal veins and extravasations in the kidneys, Pollak (*Wien. Med. Presse*, Nov. 18, 1871) has studied the phenomena of this renal hemorrhage in twelve cases on living patients, and sums up the complex symptoms as follows: Before the blood appears in the urine, the mucous membranes take on a pale dusky-bluish color, and the skin an olive-green tinge, which latter the author explains by the change of the coloring-matter of the blood into haematoxin. At the same time there are also present, in the dark troubled heavy urine, slight quantities of albumen; in the sediment, blood-corpuscles, and renal epithelium. Only after twelve to twenty-four hours is blood in any marked amount mingled with the urine in such a manner that tests for haematin and haemin are readily

responded to; the microscopic examination of the sediment will prevent confusion with hemorrhage from the bladder. The accompanying symptoms are great restlessness, loss of power to suckle, pain on pressure in the region of the kidneys. None of the children were over six weeks old; some were very vigorous before the accession of the intestinal catarrh; the result of the intestinal catarrh was usually a fatal one. Recovery occurred in two cases only, when the blood disappeared from the urine in three or four days. Anatomically Dr. Pollak (agreeing on this point entirely with Beckmann) asserts the integrity of the renal parenchyma itself. The treatment is limited to sustaining the strength by means of the mother's milk and decoction of cinchona; the former must be withdrawn artificially and fed to the child.

NEW METHOD FOR THE PERMANENT RECTIFICATION OF DISTICHIATIC EYELASHES.—Schuleck (*Wien. Med. Woch.*, lxxi. 237) reports on the employment of a suggestion of Snellen's regarding the turning outward of the cilia in distichiasis. Into a fine needle a fine silk thread is drawn by both ends, so that the middle portion forms a loop. The needle is inserted close to the lashes to be rectified, and drawn out at the normal row of the lashes. The lashes are drawn, by the aid of an iris-forceps, through the loop, and by means of the latter through the track of the needle, so that they then hold their place on the outer edge of the lid in the line of the normal lashes. At one sitting Dr. Schuleck thus transplanted from six to ten lashes. These must have a certain stiffness, for very delicate cilia are difficult to raise and difficult to seize, and, besides, are easily pulled out.

RESECTION OF THE NERVUS MEDIANUS.—In this case, which is reported by Kuby (*Bayer. Aerzl. Intell.-Bl.*, xxvi. 71), the operation was called for on account of a gun-shot wound of the muscles in the middle of the forearm. One opening lay on the outer side of the arm, the second at the inner edge of the brachialis internus muscle. The patient, who was wounded on the 6th of August, and brought to the Speyer hospital, was up to September 19 so debilitated by uninterrupted severe pain, and the consequent loss of sleep and appetite, that he begged for amputation. Dr. Kuby resolved upon resection of the median nerve. At the operation there was found in the nerve in the vicinity of the course of the bullet a thinned portion, and peripherally next it a knobby enlargement. This entire portion was excised to the extent of an inch. The neuralgia disappeared, and the wound had healed by the 27th of November. By May of the following year the pain had not returned; the second, third, and fourth fingers are without sensation, and the entire arm is wasted.

A CONTRIBUTION TO THE HISTORY OF THE DEVELOPMENT OF MYOPIA, BASED ON AN EXAMINATION OF THE EYES OF 4358 MALE AND FEMALE SCHOLARS.—The principal result of these observations, which were made by Erismann (*Von Graef's Arch.*, xvii. 1, S. 1), is that a large number of early hypermetropic and emmetropic eyes become subsequently myopic. The author therefore regards the continued use of the eyes at short distances as the most frequent and most important cause of short-sightedness, and thinks that in the majority of cases this is capable of producing myopia without any congenital disposition. He ascribes also to the too long-continued and too concentrated accommodation and convergence an almost equally deleterious influence.

M. COZE has lately made a communication to the Academy of Sciences in Paris (*Gazette Médicale*, No. 48), in which he says certain effects of projectiles used in war may be explained by referring them to the principle of the transformation of forces. When the rapid motion of a projectile is suddenly arrested by an object, it is converted into heat, by which the temperature of the projectile is raised. This is precisely what happens when a ball strikes a bone and is retained in the wound. Sufficient heat may thus be generated to melt the ball, which, having first been split up into fragments, produces an extensive burn of the surrounding tissues. Undoubtedly many of the assertions made on both sides during the Franco-German war that explosive balls had been used were due simply to ignorance of this fact.

## PROCEEDINGS OF SOCIETIES.

## PATHOLOGICAL SOCIETY OF PHILADELPHIA.

THURSDAY, DECEMBER 29, 1871.

THE PRESIDENT, DR. J. H. HUTCHINSON, in the chair.

DR. O. H. ALLIS presented a specimen of *stenosis of the pulmonary artery, apparently congenital*, taken from a man twenty eight years of age. Up to his twenty-second year he showed no signs of disease; but about this time he was attacked by measles, and six weeks later, it is alleged, by a second seizure, which was styled the "black" measles. From this time to his death the history points emphatically to cardiac disease.

A few days before his death he called in Dr. Groom, of Bristol, who, to mitigate the urgency of the symptoms, drew from the abdominal cavity thirty-four pounds of fluid. Fluid existed at the same time in both thoracic cavities and about the heart. There was a somewhat livid hue of the face, and slight oedema. General anasarca existed to a slight degree, though there was but little swelling in the extremities. A soft systolic murmur, heard most distinctly at the aortic cartilage, but diffused over the whole chest anteriorly, was present; it was not heard posteriorly. Every apex-beat caused a distinct wave to be seen over the precordial surface.

*Autopsy.*—Two gallons of fluid were taken from the *abdominal cavity*. All the viscera were covered or mottled with lymph, showing an extensive but recent *latent* peritonitis, of which there were no symptoms previous to death.

Both *thoracic cavities* contained fluid. In the left, the lung was collapsed from the entire cavity being occupied by the fluids in the pleura and pericardium. The fluid in the latter was carefully measured, and amounted to  $3\frac{1}{2}$  pints.

The *heart* weighed 17 ounces avoirdupois. The *right auricle* held 9 fluidounces. Its walls were extremely thin at some parts, and greatly hypertrophied at others. The right auriculo-ventricular opening would admit three fingers. The wall of the right ventricle was one inch in thickness. From this ventricle to the lungs there was an opening one-fourth of an inch in diameter. The left auricle was normal. The left ventricle was three-fourths of an inch thick. In this ventricle there existed a remarkable constriction just below the aortic valves, which would not readily admit the little finger, and which made the heart five-eighths of an inch less in circumference at this part than the aorta.

THE PRESIDENT, in answer to one of Dr. A.'s interrogatories, referred to a case of latent peritonitis reported by Dr. H. C. Wood in Vol. I. of the Pennsylvania Hospital Reports for 1868,—that of a man aged 20, who was brought to the hospital in a carriage, but walked from the gate to the main building,—a distance of over two hundred feet,—sat some little time in the waiting-hall, and with the assistance of a friend walked up two flights of stairs to the medical wards. There was a little tenderness on "firm pressure" on the abdomen, and typhoid fever was suspected. He died suddenly in the night, and at the autopsy the intestines and viscera were found glued together by recent lymph, the peritoneum injected and coated with coagulable lymph.

Dr. H. also referred to a case presented by him to the Society on the evening of April 18, 1871, reported in the *Medical Times* for May 15 and July 15. The patient was a boy 18 years of age, suffering from albuminoid degeneration of the liver, spleen, and kidneys, whose death was directly attributable to acute peritonitis, the existence of which had not been recognized during life,—none of the usual symptoms of the disease being present. He said further that in his experience acute peritonitis occurring in the course of a chronic disease is very frequently latent.

DR. JOHN ASHHURST, JR., recalled the fact that Professor Samuel Jackson, in his lectures at the University of Pennsylvania, was in the habit of mentioning several fatal cases of latent peritonitis which he had observed in the course of his long practice.

DR. JAMES TYSON had that day made a post-mortem examination at the Philadelphia Hospital, upon a patient who

died suddenly, in whom the symptoms before death pointed to cardiac disease. Mitral disease was found present, but in addition to this were numerous patches of fresh lymph on the costal, pulmonary, and even diaphragmatic pleurae of both lungs, together with effusion in each pleural cavity. There was also considerable peritoneal effusion. No symptoms pointed to these conditions before death.

DR. J. EWING MEARS said that he could confirm what had been said in reference to the occurrence of inflammation of the peritoneum without any symptoms indicating its presence. He had noticed in many cases of ovarian tumors coming under his observation that the operation for their removal disclosed the existence of extensive adhesions between the tumor and the surrounding viscera as well as the walls of the abdomen, without the slightest manifestation, at any time in the history of the case, of the symptoms of peritonitis.

## REVIEWS AND BOOK NOTICES.

THE PRINCIPLES AND PRACTICE OF SURGERY. By JOHN ASHHURST, JR., M.D., Surgeon to the Episcopal Hospital, Surgeon to the Children's Hospital, etc. Illustrated with five hundred and thirty-three engravings on wood. 8vo, pp. 1011. Philadelphia, Henry C. Lea, 1871.

It gives us great pleasure to call the attention of the profession to this excellent work. Our knowledge of its talented and accomplished author led us to expect from him a very valuable treatise upon subjects to which he has repeatedly given evidence of having profitably devoted much time and labor, and we are in no way disappointed.

As the title indicates, the object of the author is to describe the modes of practice now generally adopted in the treatment of surgical affections, and to expose the principles upon which those modes of practice are based. This he has done as clearly and concisely as it was possible to do. He possesses all that was necessary to accomplish his object,—knowledge of what others have done and said, good judgment in selecting the best opinion and mode of treatment, and the ability to arrange his subjects well and to express his ideas clearly.

The whole work is divided into two principal divisions, treating respectively of surgical injuries and surgical diseases. In an introductory portion are considered the process of inflammation; operations in general, with the use of anesthetics; those manipulations usually classed as belonging to minor surgery; and the various amputations. Every subject demanding it is well illustrated by wood-engravings, which assist materially, however good may be the description in the text, in the understanding of the pathological conditions or operative procedures under discussion. The index, which occupies nearly sixty pages, is one of the most carefully prepared we have ever seen.

It is our candid opinion, which we take great pleasure in thus expressing, that this treatise is, at the least, equal to any of at all similar dimensions upon the science and art of surgery; and we highly recommend it, both for the use of those beginning their studies, and of those engaged in practice who desire a work, readily consulted, that will tell them plainly, and in a few words, what is best to be done.

The mechanical execution of the book is all that could be desired; the paper, printing, and binding are excellent.

A TREATISE ON HUMAN PHYSIOLOGY; DESIGNED FOR THE USE OF STUDENTS AND PRACTITIONERS OF MEDICINE. By JOHN C. DALTON, M.D., Professor of Physiology and Hygiene in the College of Physicians and Surgeons, New York; Member of the New York Academy of Medicine, etc. Fifth Edition, Revised and Enlarged. With two hundred and eighty-four illustrations. 8vo, pp. 728. Philadelphia, Henry C. Lea, 1871.

We confess to some disappointment, on taking up the fifth edition of this popular treatise, to find it wanting in many additions which we had thought it would contain, and consider that recent advances in physiology demand. We miss more particularly any account of the recent views with

regard to the nature and formation of fibrin, the amœboid movement of the white blood-corpuscles, and its possible influence on normal and abnormal nutrition; also as regards the office of the bile in the digestion and absorption of fats; while the most recent views with regard to the histology of nerves seem also to have been but partially incorporated. With regard to fibrin, we think it has been at least determined that the old view of its being one of the constituents of living blood has been shown to be incorrect, even if the recent views of the physiological chemists as to its mode of formation are not correct. We had hoped also to see some changes in the chapter on proximate principles.

Not a few additions have, however, been made, and among the chapters which bear the marks of rehandling is that upon the glycogenic function of the liver, in which are incorporated the results of the author's recent observations on this subject, which reaffirm Bernard's views. The work is still an excellent one, and the author's simple and perspicuous style of writing will make it always a popular one.

A TEXT-BOOK OF PATHOLOGICAL HISTOLOGY: AN INTRODUCTION TO THE STUDY OF PATHOLOGICAL ANATOMY. By DR. EDW. RINDFLEISCH, O.O. Professor of Pathological Anatomy in Bonn. Translated from the Second German Edition, with Permission of the Author, by WM. C. KLOMAN, M.D., assisted by F. T. MILES, M.D., Professor of Anatomy in the University of Maryland. With two hundred and eight illustrations. 8vo, pp. 695. Philadelphia, Lindsay & Blakiston, 1871.

AN INTRODUCTION TO PATHOLOGY AND MORBID ANATOMY. By T. HENRY GREEN, M.D., London, Member of the Royal College of Physicians; Lecturer on Pathology and Morbid Anatomy at Charing Cross Hospital Medical School, etc. Illustrated by Numerous Engravings on Wood. 8vo, pp. 260. Philadelphia, Henry C. Lea, 1871.

For the first time since microscopical anatomy has become the basis of a true pathology, American students, and, indeed, we may say English students, have access to a suitable textbook in their own language. Heretofore the opportunity of studying pathology has been limited to a comparative few who were familiar with the German and French. But in the translation of Rindfleisch we have furnished us not merely an excellent guide, but actually the best which could be made available either to practitioner or student.

It would be impossible, and it is indeed needless, to present a résumé of its contents. The volume is a faithful exposition of the present state of pathological histology; each subject is fully and systematically treated, and may, therefore, be studied independently of any relation to others. With what has been said, however, an idea of the extent and completeness of the work may be obtained from the following list of subjects treated: 1. Decomposition and degeneration of tissues; 2. Pathological new formations; 3. Anomalies of the blood and the places of its formation, especially of the spleen and lymphatic glands; 4. Anomalies of the circulatory apparatus; 5. Anomalies of serous membranes; 6. Anomalies of the skin; 7. Anomalies of mucous membranes; 8. Anomalies of the lung; 9. Anomalies of the liver; 10. Anomalies of the kidney; 11. Anomalies of the ovaries; 12. Anomalies of the testicles; 13. Anomalies of the mammae; 14. Anomalies of the prostate gland; 15. Anomalies of the salivary glands; 16. Anomalies of the thyroid gland; 17. Anomalies of the supra-renal capsules; 18. Anomalies of the osseous system; 19. Anomalies of the nervous system; 20. Anomalies of the muscular system.

The work of the translators has been well done, and although a few idiomatic sentences have crept into the text which are not very intelligible, they scarcely impair the value of the work. Thus, in the Introduction, page 17, occurs the following sentence, "The period of life, that gradual growth and decay of the body, is mirrored up to a certain degree in the constitution of the tissues,"—which, we confess, is quite unintelligible to us. Again, the second sentence in paragraph 9, page 20, and the concluding sentence of page 24, awkwardly convey their meaning. These defects become even less numerous as we advance in the volume, and, if the book sells as it should, an opportunity will soon be presented of correcting them in a second edition. No physician or student should be without it.

Had not the translation of Rindfleisch been published, much that has been said of it might have been written of the Introduction to Pathology and Morbid Anatomy, by Green, of London, and reprinted by Henry C. Lea, of this city. We fear its use will be largely supplanted by the former volume, from which, indeed, many of its valuable stores in the shape of matter and illustrations are drawn. It is, however, an excellent work, and, being smaller and less expensive than that of Rindfleisch, recommends itself on these grounds.

THE PHYSICIAN'S ANNUAL FOR 1872: A COMPLETE CALENDAR FOR THE CITY AND COUNTRY PRACTITIONER: comprising a Monthly Calendar, Hospital Calendar of the Principal Cities of the United States, Chronological Record, List of Medical Colleges and Institutions, a Complete List of Medical Societies of the United States, with Form of Constitution for Medical Societies, Priced Catalogues of Medical Books, Surgical Instruments, etc.; besides much other Information of Interest and Importance to Physicians. Edited by S. W. BUTLER, M.D., and GEO. H. NAPHEYS, M.D. Pamphlet. Philadelphia, S. W. Butler, M.D., 1872.

The title-page of this little work indicates so fully the nature of its contents that it is not necessary that this notice should be a lengthy one. The aim of the editors has been to fill a void in the medical literature of this country, by presenting in a condensed form much useful information on a variety of subjects that can be had from no other source. This seems to have been successfully accomplished, and the book will, we think, be found useful to physicians.

#### BOOKS AND PAMPHLETS RECEIVED.

Transactions of the Medical Society of New Jersey, 1871. 8vo, pp. 33. Newark, N.J.

Transactions of the Second Annual Session of the Medical Society of Virginia, 1871. 8vo, pp. 116. Lynchburg, Va. Announcement, Charter of Incorporation, and By-Laws of the Woman's Hospital of the State of Illinois. Pamphlet. Chicago, 1871.

A Clinical Manual of the Diseases of the Ear. By Laurence Turnbull, M.D., Physician to the Department of Diseases of the Eye and Ear of Howard Hospital of Philadelphia, etc. With a Colored Lithographic Plate and over one hundred Illustrations on Wood. 8vo, pp. 486. Philadelphia, J. B. Lippincott & Co., 1872.

First Annual Report of the Board of Health of the Health Department of the City of New York; April 11, 1870, to April 10, 1871. 8vo, pp. 628. New York, 1871.

Third Annual Report of the Children's Hospital. Boston, 1872.

Proceedings of the Second Annual Session of the State Medical Association of Arkansas, 1871.

Circular No. 6. Medical Supply Table of the U.S. Marine Hospitals, Washington, 1871.

#### GLEANINGS FROM OUR EXCHANGES.

THE SUBCUTANEOUS INJECTION OF MORPHIA IN TRAUMATIC ERYSPIELAS.—Professor Estlander, of Helsingfors (*Medical Times and Gazette*, December 9, 1871; from the *Deutsche Klinik*, No. 39), recommends the hypodermic use of morphia in the treatment of erysipelas. From the eighth to the fourth of a grain of the acetate or of the chlorate of morphia is to be injected in or near the affected part. The next day the inflammatory process, which during the preceding twenty-four hours may have made considerable progress, will be found in many cases to be at once arrested; but more frequently it will continue in a diminished degree, gradually yielding in the course of a few days to a continuation of the treatment. This plan of treatment admits of the simultaneous use of other remedies. As soon as, from shivering and the

appearance of the wound, erysipelas seems threatening. Prof. Estlander administers an emetic,—a measure which he thinks nowadays too much neglected, and one which he believes conducive to the moderation of the disease. The morphia is next injected, either as the sole means, or in conjunction with a daily painting with iodine, employing afterwards wadding, and compression by a roller where practicable.

CARDIAC COMPLICATIONS IN SMALLPOX, AND THEIR TREATMENT.—M. Desnos, Physician to the Lariboisière, is the author of a paper on this subject in the *Bulletin général de Thérapie* for November 15. All the forms of smallpox are not equally liable to be accompanied by cardiac complications. These are always absent in varioloid, are rare in the discrete form of variola, are more common in the form of variola in which the vesicles are collected in clusters, and are so frequent in confluent variola that their presence may be said to be the rule, their absence the exception. Myocarditis is more frequent than either endocarditis or pericarditis, in the confluent form; but all of them may exist in the same patient. In the other forms, inflammation of the endocardium and of the pericardium occur more frequently than that of the muscular substance of the heart. The post-mortem appearances of endocarditis and pericarditis do not differ from those presented by these diseases when occurring under other circumstances. They generally begin insidiously, causing but little increase of temperature, and scarcely any palpitation of the heart, or substernal pain. There are no peculiar physical signs.

In myocarditis the muscular fibre appears to the naked eye to be hyperemic, bright red in color, but less consistent and more friable than normal; later it becomes pale red, and then grayish. Upon section, the tissue of the heart has a granular aspect, resembling that of the cortical substance of the kidney in Bright's disease. Later, its consistence gradually diminishes; its fibres become indistinct, and resemble dead leaves in color (*couleur feuille-mort*); the finger penetrates readily into the softened tissue; the papillary muscles are atrophied, and ruptured by the slightest pressure. This softening may be so marked that the heart will take the form and impression of anything with which it is brought in contact. When the heart is examined microscopically, there will be found granular degeneration of the muscular fibre, with an increased growth of the cellular tissue. Dr. Desnos looks upon this as the expression of an inflammatory process, and not as the result of decay. The symptoms of myocarditis are not characteristic in the beginning, and when the disease is advanced they do not differ from those usually presented by it, and depend in great part upon the paralysis of the muscular structure of the heart. In consequence of this paralysis, insufficiency of the mitral and tricuspid valves may occur, giving rise to a murmur which is soft, deep-seated, diffuse, transitory, and having a tendency to change the point where it is heard most distinctly. This is sometimes under the left nipple, and sometimes to the right of the sternum. The murmur becomes less distinct as the disease advances, and finally disappears. At the same time the pulsations of the heart grow feebler, until only a slight fremitus is felt.

The prognosis of the cardiac complication is always grave,—much more so in myocarditis than in endocarditis and pericarditis; in fact, myocarditis is one of the principal causes of sudden death in variola. It is, however, in many cases not beyond the reach of medicines. In the beginning, when there is reason to believe that inflammation still exists, local antiphlogistics, digitalis, and large blisters over the precordial region may be of service. As soon, however, as the period of excitement has passed, caffeine, in doses of from two to ten grains, may be given, for its stimulant effect upon the muscular structure of the heart. Wine and quinia may also be prescribed, as tonics.

INTESTINAL OBSTRUCTION FROM ACCUMULATION OF FÆCES CURED BY THE INTERNAL AND EXTERNAL USE OF ICE.—M. Prunac reports (*L'Abeille Médicale*, December 25; from *Le Gazette des Hôpitaux*) a case in which urgent symptoms of intestinal obstruction, dependent upon this cause, yielded to the application of ice to the abdomen, and to injections of ice-water every quarter of an hour, after having resisted the more usual methods of treatment.

INJECTIONS INTO THE MEDULLARY TISSUE OF BONES.—M. Demarquay, in a communication made to the Académie de Médecine (*Gazette Hebdomadaire*, Oct. 27, 1871), gives the results of some experiments in which purulent and putrid liquids were injected into the medullary tissue of bones of rabbits. During the life of the animals it was observed that (1) their hair was altered, (2) they emaciated to a sensible extent, (3) the temperature of their bodies was raised from 38° Cent. to 39°, and in some cases even to 41° or 42°, to diminish again a moment before their death. After death the autopsies showed: 1. An inflammation, more or less marked, of the part operated upon. 2. Pulmonary congestion, inflammation of the lungs, and in one case gangrene of the lung. 3. Congestion and softening of the liver, spleen, and kidneys. 4. Metastatic abscesses of the liver in different degrees of development. These abscesses, although easily recognizable by the naked eye, have been carefully studied microscopically by M. Hénoque, who confirms the accuracy of M. Demarquay's observations. From the rapidity with which liquids holding solids in suspension are taken up by the circulation when thrown into the medullary tissue of bones, M. Demarquay concludes "that the veins of the bones open directly into the medullary cavity, or that they are only separated from it by a thin wall resembling the internal coat, which is able to withstand only a feeble pressure."

APPLICATION OF THE ATOMIC THEORY TO CHEMISTRY.—The following excellent remarks on this subject, by Professor Cannizzaro, are published in the *Journal of Applied Chemistry* for November, 1871, taken from a late number of *Nature*:

"A few are still dissatisfied with the arguments against the dualistic system, and continue to employ the atomic weight of Berzelius or the equivalents of Gmelin; and among those who have adopted the new system of atomic weights and formulae there are many who have done so merely in a spirit of concession, and make a display of skepticism respecting its intrinsic value. Others, on the contrary, push their faith to the extent of fanaticism, and give equal value to the essential and accessory parts of the system, or even cling to the hypotheses which merely lean against it or have been discarded. They often speak on molecular subjects with as much dogmatic assurance as though they had actually realized the ingenious fiction of Laplace,—had constructed a microscope by which they could detect the molecules and observe the number, form, and arrangement of their constituent atoms, and even determine the direction and intensity of their mutual actions. These things, which have been offered as hypotheses more or less probable, and to be taken for what they are worth as simple artifices of the intellect, are valuable, and have done good service in collocating facts and inciting to further careful investigations, that one day or other may lead to a true chemical theory; but when perverted by being stated as actual truths they falsify the intellectual education of students of inductive science, and bring reproach upon the modern progress of chemical science."

DIAGNOSIS OF URETHRAL AND VESICAL DISEASES.—Sir Henry Thompson, in the course of a clinical lecture on this subject (*British Medical Journal*, December 9, 1871), says that he is in the habit of employing only four questions for urinary patients. The first question is, Is there any deviation in the frequency of passing urine? The second is, Is there any pain in the act? The third is, Is there any blood in the urine? And the fourth is, Are the characters of the urine altered? Almost any disease of the urinary organs will produce some deviation in the natural frequency of passing urine. As a rule, a man in health does not generally rise at night to pass urine, and he passes it during the day about five or six times. Cystitis will of course produce frequency of micturition, but stricture of the urethra may exist for some time before the patient is troubled in this way. If the frequency is greater during the day than at night, then the probability is in favor of his having a calculus in his bladder. If on the other hand the patient is most troubled at night, it is most probable that he is the subject of hypertrophied prostate. If the pain felt during the act of micturition be seated low down in the belly, there is almost certainly chronic cystitis. If the pain is in the penis or perineum, and is felt before micturition, it simply indicates that the mucous membrane is becoming

uneasy in consequence of distension. If the patient feels it after or during the passage of the urine, it indicates that he probably has stone; and this probability is increased if it be referred to the end of the penis, and if it be increased by exercise; but occasionally in chronic prostatitis the pain is also at the end of the penis. When blood is passed, it indicates either hypertrophy of the prostate or calculus; in the former case the blood is intimately mixed with the urine and is dark in color, while in the latter it is florid in tint, and is very apt to appear in the urine after a ride or drive, and to disappear when the patient is kept quiet. Much is to be learned also from an examination of the character of the urine. The first urine passed is not the best fitted for examination, as it will contain whatever happens to be lying in the urethra at the time. In cases of gleet or chronic prostatitis it is, therefore, not uncommon to find in the first few ounces pus and mucus and blood-corpuscles, while these may be entirely wanting in the rest of the urine.

**ABDOMINAL PUNCTURE IN TYPANITIS.**—Mr. Wather's communication on this subject has called forth a reply from Mr. McBride in the *British Medical Journal* for November 4, in which the latter calls attention to the fact that the colon is not often punctured in the lower animals for the relief of tympanitis. The operation would not be without danger. The part of the intestine of the ox usually punctured is the first stomach (rumen), which is not liable to suffer from inflammation.

**EFFECTS OF SWINGING IN DEPRESSING THE TEMPERATURE OF THE BODY.**—Dr. Wjatschelaw Manassein (*The Academy*, November 1) gives the results in one of the last parts of *Pflüger's Archives* of a considerable number of experiments on rabbits, which he subjected to the action of swinging, the swing making from thirty to forty double vibrations in the minute. In all instances the temperature of the interior of the body fell, the maximum depression being  $10.2^{\circ}$  C., the minimum  $0.3^{\circ}$  C., and the average  $0.66^{\circ}$  C. The effects were fully marked in about fifteen minutes, and lasted for about two hours. The tendency to sleep was always distinctly expressed. The depression in the temperature of the body was not occasioned by the mere renewal of the air in contact with the surface, as this was carefully guarded against by enveloping the animal in wool. The experiments have a practical side, as showing that swinging has the same effect in depressing the animal temperature in rabbits made ill by the injection of fetid pus into their vessels. Their temperature may in such cases even be lowered to the normal degree.

**ANATOMY OF THE BRAIN.**—A very elaborate account of the anatomy of the brain (*The Academy*, December 1) appears in the recently published part of Stricker's *Manual of Histology*, and a paper by the same author appears in the *Wien. Akad. Sitzungsberichte*, Band Ix., Abtheilung 2, on the central projection of the special senses. The former is too difficult and complicated for any résumé to be given of it, but in the latter he points out: 1. That the central projection-area of the auditory labyrinth is represented by the walls of the Sylvian fissure, whether he has been able to trace a fasciculus from the nuclei of origin of the auditory nerve. 2. The central projection of the eye he considers to exist in the cortical substance of the occipital and of the temporal lobes, since he has been able to demonstrate the presence of connecting fibres passing to these regions from the nuclei of origin of the optic tract. 3. The central projection-area of the skin is effected by the parts of the cortex of the cerebrum investing the occipital and temporal lobes. It is noteworthy that both the sensory roots of the spinal cord and the tracts which represent the sensory nerves of the head possess a direct origin from the cortex of the cerebrum without intervention of the cerebral ganglia. 4. The central projection of the organ of smell, the medullary fibres of the olfactory lobe, is connected with the medulla of the anterior commissure, as Malacarne and others have shown, and this not only in mammals but in man. The anterior commissure conducts fibres connecting the two cerebral lobes, as well as the two olfactory lobes, and may, therefore, be regarded as an olfactory commissure; and the medullary fibres which this commissure sends to the cortex (namely, to the temporal and occipital lobes), as the central radiations of the vesical organs and skin.

**CHRONIC CHLOROFORM NARCOTISM.**—Dr. Anstie, in the course of an interesting article on this subject in the December number of *The Practitioner*, says that "one needs to be ever repeating, what is constantly forgotten, that alcohol and chloroform are strictly analogous with each other, though different in nearly all the phases of their action. Sulphuric ether is similarly analogous to both. They are all three pure stimulants (*i.e.* restorers of calm, natural functions) in small doses, inebriants when given in larger quantities, and anaesthetic narcotics in full doses." The great insolubility of chloroform in the serum of the blood causes it to escape entirely, or almost entirely, from the lungs within a very short time (one hour?) after its administration, and without undergoing decomposition in the body. This fact, which renders it so valuable an aid to the surgeon, becoming known to people generally, has led to its use by the sufferers themselves in various chronic painful affections. Apart from the danger of fatal chloroform narcosis being produced by this exceedingly rough and unskillful tampering with a potent narcotic, the practice of constant and protracted dosing with chloroform may cause chronic mischief, less in degree than, no doubt, but essentially similar in kind to, that which is produced by long-continued alcoholic excess. In this way maniacal excitement, resembling mania-a-potu, recurrent vomiting, insomnia, erotic excitement, especially in women at or near the menopause, and degenerative changes which accurately imitate the degradation of tissue produced by chronic drink, may be produced.

**A SUPPURATING ECHINOCOCCUS UNDER THE SKIN OF THE NECK.**—A girl aged 16 years (*Wiener Medizinische Presse*, November 19) was the subject of a swelling beneath the skin of the left side of the neck, which, upon being laid open, was found to be an echinococcus cyst in a suppurating condition. The neck is a rare situation for echinococci, according to Bergmann, who was able to collect only nine cases.

**A RARE DEFORMITY OF THE THUMB.**—A child aged 8 years, who was brought to Dommreicher's clinic (*Wien. Med. Presse*, November 19, 1871), presented the following deformities of the thumbs: The thumb of the right hand had three phalanges, and resembled in appearance the index-finger. On the left hand there were two thumbs, each having three phalanges.

**COD-LIVER OIL DEPRIVED OF ITS DISAGREEABLE ODOR AND TASTE.**—M. Carlo Pavesi writes to the *Journal de Pharmacie et de Chimie* (*Bulletin général de Thérapeutique*, November 15) that cod-liver oil may be rendered palatable and free from disagreeable odor in the following way: Take 400 grammes of cod-liver oil, 20 grammes of burnt coffee, ground, and 10 grammes of animal black; put them in a glass matress, and heat in a warm bath to  $50^{\circ}$  or  $60^{\circ}$  C. during a quarter of an hour, the matress being carefully corked. The mixture is to be allowed to stand for two or three days, being shaken from time to time, and is then to be passed through a filter. Cod-liver oil thus prepared is clear, and of an amber color. Its odor and taste are very like those of coffee, and do not resemble those of fish. Reagents prove that it contains all the principles of a pure oil.

**HEBRA,** the celebrated Professor of Dermatology at Vienna, recently made (*Gazette Médicale*, No. 45), in the course of his clinical lectures, the following curious statements:—1. About 96 per cent. of parents of children who have been affected with prurigo die of phthisis; 2. Women who have been for a long time sufferers from eczema of the scalp become in old age the subjects of cancer; 3. Variola and varicella are essentially the same disease. He has seen a severe epidemic of varicella developed from a single case of varicella.

**A QUESTION OF PRIORITY.**—Dr. J. S. Lombard, late Assistant Professor of Physiology in Harvard University, writes to the *New York Medical Journal* (*Boston Medical and Surgical Journal* for November 9, 1871), desiring to call attention to an error in the last of Prof. Moritz Schiff's excellent articles entitled "Recherches sur l'Echauffement des Nerfs et des Centres nerveux à la Suite des Irritations sensorielles et sensitives," published in the *Archives de Physiologie normale et pathologique*, July and August, 1870. In speaking of Dr. Lombard's investigations on the relation between various mental conditions and the temperature of the head, Prof. Schiff claims priority in the discovery of the facts announced by Dr. Lombard. He says he has not seen the original paper,

but knows Dr. Lombard's experiments only by the analysis of them which appeared in the *Archives de Physiologie* of September, 1868. He then states that as early as the winter of 1867 and 1868 he communicated his principal results and his method to the Museum of Natural History of Florence, and that the Italian journals published short extracts from them in April and May. Dr. Lombard says that Prof. Schiff evidently supposed that his (Dr. L.'s) original paper had appeared but a short time before the analysis in the *Archives*, but that, "on the contrary, my researches had all been published in the *New York Medical Journal* of January, 1867, and had, therefore, appeared more than a year before the analysis." Dr. Lombard's date of publication is, consequently, six months prior to the earliest date claimed by Prof. Schiff. Not only this, but most of Dr. Lombard's results had been communicated to the "Boston Society of Medical Observation" prior to June, 1867, and, in fact, many of the experiments had been completed in the autumn of 1866.

**PARALYSIS OF THE BLADDER TREATED BY THE CONSTANT CURRENT.**—Dr. Althaus, in the *British Medical Journal* for November 18, calls attention to some experiments of Professor Budge, of Greifswald, who faradized various parts of the brain so as to determine the source of the nervous supply of the bladder. It was observed that by faradizing the cerebral hemispheres, the corpora striata, and thalamus optici, no effect was produced, nor did any action become perceptible when the cerebellum was faradized. As soon, however, as the pedunculi cerebri and the restiform bodies were touched by the electrodes, the viscous was seen to contract, and urine was voided. The pneumogastric and sympathetic may be divided without altering the phenomena previously observed; but, after section of the cord, faradization of the parts just mentioned proved ineffectual. Besides the one just mentioned, there is another nervous centre for the bladder, in the lower portion of the lumbar cord, faradization of which causes well-marked movements of the viscous, and the excitability of which after death persists longer than that of any other portion of the cord in relation to the bladder.

Another important result of Budge's researches has been that the muscle hitherto described by anatomists as sphincter of the bladder is really no sphincter at all, physiologically speaking, and that the longitudinal as well as the circular unstriped muscular fibres of the bladder—that is, the muscles known as detrusor urinæ and sphincter vesicæ—serve exclusively for expelling the urine, without having the least effect in closing up the orifice of the viscous. Faradization of these muscles did not prevent the flow of urine, which was immediately checked when the electrodes were directed to the membranous portion of the urethra, acting upon the constrictor urethrae and bulbo-cavernosus muscle.

**EXCISION OF THE HEAD AND SHAFT OF THE FEMUR.**—Dr. Kearns reports in *The Clinic* for December 30 a case in which he performed the above operation for coxalgia. He says, "I made an incision over the trochanter and down the shaft; exposed the head without difficulty, the amount of suppuration having separated the bone from the tissues to a great extent,—the head, separated from the neck, remaining attached to the acetabulum. The neck and trochanter being diseased, I exposed five or six inches, seeking for healthy bone, before excising. At this point the bone was removed, but found still to be diseased. Twice afterwards a section an inch and a half each was removed, bringing me to the expansion above the condyles. The adherent head was removed from the acetabulum, the cavity carefully cleaned out, and the wound closed by sutures and adhesive strips and placed in any position the little patient afterwards thought most comfortable. Any manner of extension was considered impracticable, from the extent of the wound, and extreme debility of the patient. . . . The wound healed kindly, the discharge continuing longest at the point opposite the acetabulum. In six weeks' time the boy was upon his crutches, and walked around in the hospital and grounds adjacent, the weight of his foot continuing the extension, and in fact being the only extension the limb ever had. At the expiration of three months he left the hospital, and I have seen him only once since December 1, when, upon careful examination of the limb, I found, where the femur was, a hard substance larger than the

natural bone, which I am inclined to think is ossific matter. The limb is not atrophied, or very little, and shortened five and a half inches; the motion of hip and knee being good, with power to flex and extend, to rotate, adduct, and abduct, and with power sufficient in the leg to support for a short time the weight of the body. The boy's health seems perfectly restored."

**SNAKE-BITES TREATED WITH AMMONIA.**—The *Indian Medical Gazette* says (*Nature*, November 30) that a report, furnished by the Inspector of Police to the Bengal Government, shows that, of 939 cases of snake-bites in which ammonia was administered by the police, 702 are reported to have recovered, and the average length of time between the bite and the application of the ammonia is said to have been, in fatal cases, four hours, twelve minutes, and thirteen seconds, and, in cases of recovery, three hours, twenty-eight minutes, and fourteen seconds.

## MISCELLANY.

**THE EXHIBITION DURING THE SESSION OF THE ASSOCIATION.**—In accordance with the determination to have an exhibition on the 7th, 8th, 9th, and 10th of May, 1872, during the next Session of the Association, the Committee of Arrangements have issued a Circular (dated January 20, 1872) in which they "respectfully and earnestly appeal for contributions of objects to be exhibited—and for other available co-operation—to members of the medical profession, pharmacists and manufacturers of chemicals, to opticians, instrument makers, publishers and booksellers, and to all others who are concerned in manufacturing or dealing in anything related to the study and practice of medicine and surgery and the associate sciences."

"They will gratefully receive choice specimens and examples (likely to prove interesting through novelty, rarity, importance, or superior character) of drugs, medicines, and other remedial appliances—including special chemicals and pharmaceutical compounds and materials—as well as the apparatus employed in pharmaceutical and chemical processes; also of optical and other instruments of observation and precision; of surgical instruments and implements; of preparations and objects in natural history, including human and comparative anatomy, morbid or healthy; of models, drawings, paintings, prints, and of printed works—of recent date or standard character—on medicine, surgery, and the associate sciences."

The committee trust, moreover, that their avowed "hesitation to undertake a very general exhibition will be attributed rather to a natural doubt of their power to accomplish the work with the means at their disposal, than to any disinclination or indifference as to the result." The present call has been issued "at the earliest practicable moment, in the hope of securing a sufficiently prompt attention, from all parties, to enable them to do justice to the distant contributors, whom they are still apprehensive of being unable to reach in proper time."

They notify exhibitors that "the general plan of arrangement, and amount of space to be allotted to the several departments and collections, will have to be decided by the end of March; and all the objects to be exhibited must be within reach of the committee by the second or third week of April next."

"In order, therefore, to prevent confusion and disappointment, lists of objects offered for exhibition, and estimates of the amount of space desired for the purpose, will be required as soon as practicable after the publication of this circular."

"Communications addressed to Wm. Pepper, M.D., 1215

Feb. 1, 1872]

## MEDICAL TIMES.

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Walnut Street, and F. F. Maury, M.D., 1218 Walnut Street, the Sub-Committee on the Exhibition, will receive immediate attention."

Signed by

EDWARD HARTSHORNE, M.D.,  
Chairman of the Committee of Arrangements,  
1439 Walnut St., Philadelphia,

and

D. MURRAY CHESTON, M.D., Secretary,  
25 S. 16th St., Philadelphia.

A FEMALE BONE-SETTER.—The *British Medical Journal* for November 25 contains an account of a female bone-setter, named Regina Dal Cin, who has obtained a wide-spread reputation, and has visited, among other places, Venice, Trieste, Pesth, and Vienna. In each place crowds of patients, both belonging to the locality and coming from a distance, have flocked to her. Professional opinion is divided as to her merits. Recently, in Vienna, where her proceedings have attracted a good deal of attention and have given rise to some degree of controversy in medical circles, an officially appointed committee, consisting of Drs. Weinlechner, Lorinser, and Mosetig, accompanied her in her visits to four patients. Their report was very unfavorable to her pretension. The substance of it was to the effect that she has only the most superficial idea of the nature of a dislocation, or of the means of reducing it; that in one case she mistook the great trochanter for the head of the femur; that her operative proceedings consist in the performance of purposeless and hasty movements, which can neither reduce a dislocation nor remove a contraction; and that her statements as to the comparative length of the limbs are deceptive. In consequence of the unfavorable nature of this report, the permission to practise, in Vienna which had been granted to her has been withdrawn.

THE PRINCE OF WALES' ILLNESS.—A report in the *British Medical Journal* for December 9 shows that there is abundant reason for believing that the Prince of Wales contracted the fever from which he is now convalescing while the guest of Lord Londesborough, at Scarborough. The lodge, the writer says, affords in perfection all the conditions fitted to favor the introduction and propagation of enteric poison. The house is ill built and difficult to ventilate, with thirteen communications with two cesspools, which are in the basement and inside the house. These cesspools empty into sewers which run by a common outlet downwards towards the sea and join the system of common sewers of the south district of Scarborough. This sewer-system is subject to great backward pressure from the influence of the tides, which produces so great a pressure of sewage gas upon the traps, in the absence of ventilation of the sewers, that the most efficient and complete traps cannot resist it: consequently, during the reflux of the tide, the lodge, with its thirteen sewer-openings, and its cesspools beneath, was subject to inundations of the sewer gas. It is also shown that typhoid fever existed in at least one district the sewers of which fall into a common outlet with those of Londesborough Lodge; so that the back-draught might have carried back to the lodge any poisonous emanations with which the common sewer was charged. A large proportion of the party assembled to meet the prince became affected with diarrhoea, and, in addition to Lord Chesterfield, who occupied the prince's room after his departure, two servants employed in the house at the time were attacked by typhoid fever. Moreover, the visitor who occupied the room

just before the prince was affected with diarrhoea. Adjoining this room was a cabinet containing a water-closet, which was connected with a cesspool beneath.

IODIDE OF POTASSIUM.—The price of this medicine has undergone, according to the London *Lancet*, a very significant increase during the last few months. In June it was 16s. 6d. per lb.; in July, 20s.; in August, 24s. 6d.; in September, 28s.; in October, 30s.; in November, 36s. or 38s. This increase in price is probably due partly to an increased consumption of the drug in medicine since it has been discovered not only that the human system bears much larger doses of it than was supposed, but that many inveterate forms of syphilitic disease yield to large doses after having resisted smaller ones, and partly to the extensive use which is now made of it in photographic processes.

SCANDINAVIAN PHARMACY.—In Sweden, Norway, and Denmark the number of apothecaries is limited by law, there being only about four hundred in the three kingdoms, about one-third of the number in the city of London alone. In the town of Christiania, with a population of 60,000, there are but seven; in Bergen, which has 30,000 inhabitants, there are three; and in Copenhagen, with 175,000 inhabitants, there are thirteen. The names of the proprietors are never attached to the shops, but these are distinguished by figures, those of the lion, swan, and elephant being the favorites. The windows contain nothing but scientific apparatus, and within the shops nothing is sold but medicines, not even perfumery or secret remedies.

EFFECT OF WEARING HIGH-HEELED BOOTS.—Prescott Hewett, Esq., F.R.S., Surgeon to St. George's Hospital, London, thus discoursed, in a clinical lecture on a case of severe injury to the lower end of the femur (*Medical News and Library*, December, 1871), concerning high-heeled boots. In describing the cause of the injury sustained by the patient, he stated that "she wore high-heeled boots. I do not know how it has happened, but there have been a great many accidents in the International Exhibition. I suppose they must have arisen partly from the height of the stairs, and partly from the height of the ladies' heels. Ladies are anxious to look tall, thinking that their appearance is improved, and therefore they wear high-heeled boots. The first thing to which I would call your attention in this case is the high heels of the boots. Ladies will for the most part wear them; but they could not do a worse thing, for their feet are placed in a difficult and most unnatural position. They are very tenacious about this fashion, but you must be as tenacious against it; the number of accidents in consequence is very great. To show you how very tenacious ladies are on this point, last year I was sent for to see a young lady in one of our London hotels. She wished to consult me about her foot. On seeing it, I thought its state depended on her boots, and I asked to see them. The boots were brought in by the lady's maid, but the only thing I could observe about them was an immensely high heel. I said, 'It is the high heel of your boots that causes the mischief, and unless you diminish this I can do nothing for you.' She became quite angry, and said 'she could not alter them: 'I cannot do it, and I will not.' Suddenly she toned down, and said, 'Pray, sir, what would people say if they saw me walking about the Park without high heels?' I said, 'It is simply heels *versus* brains. If you have brains, you will cut off the heels; if you have no brains, you will continue to wear them.' She fortunately had brains, cut off the heels, and her foot got quite well."

**THE INJURIOUS INFLUENCES OF SCHOOLS.**—Dr. Rudolf Virchow has lately published an essay which has been translated into English, and in which he has brought together many valuable suggestions with regard to the hygienic influences of the public schools of Prussia. We have not seen the book, but the conclusions of the author are said, by the New York *Tribune*, to be succinctly stated, to be as applicable to this country as to Prussia, and to afford fruitful materials for reflection to all who have at heart the progress of education. Among the injurious influences of the prevailing school-system which Professor Virchow enumerates is the tendency to produce congestion of blood in the head. In the bending of the neck, the blood-vessels which should bring back the blood from the head to the breast are compressed. The pressure is increased by tight clothing, and other circumstances have a similar effect. The result is a pressure on the stomach, hindering the activity of the diaphragm, the most powerful of the muscles of inspiration. The reflux of the blood from the veins of the neck to the breast is thus impeded. The strained activity of the brain, causing an increased flow of blood through the arteries, also contributes to the production of the evil. Headache, bleeding of the nose, goitre, curvature of the spine, and diseases of the chest, are among the troubles that may be traced to this cause. Other evils are pointed out by Professor Virchow, which may suffice to arouse public attention to the subject, although at present, he admits, there is such a want of exact information that it is difficult to propose an adequate remedy.

THE death of Johann Florian Heller, Professor of Pathological Chemistry in Vienna, occurred on the 25th of November, of disease of the heart.

THE results of experiments made at Vienna with condurango, a quantity of which the Austrian government purchased at a high price, have shown it to be quite worthless.

**OFFICERS OF THE MEDICAL SOCIETIES IN PHILADELPHIA.**—The principal officers of five of the medical societies in this city are as follows:

*College of Physicians of Philadelphia.*—President, George B. Wood, M.D.; Vice-President, George W. Norris, M.D.; Secretary, John H. Packard, M.D.; Treasurer, J. Rodman Paul, M.D.; Librarian, Robert Bridges, M.D.; Curator, Thomas Hewson Bache, M.D.; Recorder, J. Ewing Mears, M.D.

*County Medical Society.*—President, D. Hayes Agnew, M.D.; Vice-Presidents, Drs. J. G. Stetler and Wm. Goodell; Recording Secretary, Dr. Lucius S. Bolles; Assistant Recording Secretary, Dr. Nathan Hatfield; Corresponding Secretary, Dr. Henry Leaman; Treasurer, Dr. Wm. M. Welch.

*Pathological Society.*—President, James H. Hutchinson, M.D.; Vice-Presidents, William Pepper, M.D., and John H. Brinton, M.D.; Secretaries, W. W. Keen, M.D., and J. Ewing Mears, M.D.; Treasurer, Wharton Sinkler, M.D.; Recorder, James Tyson, M.D.; Curator, De F. Willard, M.D.

*Obstetrical Society.*—President, Wm. Goodell, M.D.; Vice-Presidents, John L. Ludlow, M.D., John S. Parry, M.D.; Secretary, James V. Ingham, M.D.; Curator, Horace Williams, M.D.

*Northern Medical Association of Philadelphia.*—President, Dr. Lemuel J. Deal; Vice-President, Dr. N. Hatfield; Treasurer, Dr. A. M. Slocum; Recording Secretary, Dr. Charles Carter; Corresponding Secretary, Dr. Joseph R. Bryan; Reporting Secretaries, Drs. F. W. Lewis and Chas. K. Mills.

**EPIDEMIC DISEASES** appear to be very prevalent at the present time in Vienna, the number of cases of measles, smallpox, scarlet fever, and diphtheria having recently undergone a marked increase.

Cholera has broken out at Medina, and between September 21 and October 4, 773 deaths took place. It is also present in Mecca. Cases have occurred at St. Jean d'Acre, Samsoo, Galatz, Amol, and Astrachan.

**OPPOLZER'S SUCCESSOR.**—It is said that Professor Bamberger, of Würzburg, has at length been appointed Professor of Medicine in the University of Vienna.

**MORTALITY FROM SMALLPOX.**—The number of deaths from smallpox in Philadelphia during the weeks ending January 13 and 20 were 425, of which 242 were of minors.

**MORTALITY OF PHILADELPHIA.**—The following reports are condensed from the records at the Health Office:

		For the week ending	
		Jan. 13.	Jan. 20.
Consumption		49	54
Other Diseases of Respiratory Organs		56	59
Diseases of Organs of Circulation		12	13
Diseases of Brain and Nervous System		47	46
Diseases of the Digestive Organs		14	14
Diseases of the Genito-Urinary Organs		11	8
Zymotic Diseases		241	229
Cancer		9	6
Casualties		4	6
Debility		21	27
Intemperance		0	1
Malformation		0	1
Murder		1	0
Old Age		14	17
Scrofula		1	2
Stillborn		22	15
Suicide		2	0
Tetanus		0	2
Tumors		0	2
Unclassifiable		14	12
Unknown		0	1
Totals		518	508
Adults		263	244
Minors		249	264

## OFFICIAL LIST

### OF CHANGES OF STATIONS AND DUTIES OF OFFICERS OF THE MEDICAL DEPARTMENT U. S. ARMY, FROM JANUARY 5, 1872, TO JANUARY 18, 1872, INCLUSIVE.

**PETERS, DR. WITT C., SURGEON.**—By S. O. 13, War Department, A. G. O., January 16, 1872, to report in person to the Commanding General, Department of the South, for assignment to duty.

**HOPF, A. H., ASSISTANT-SURGEON.**—By S. O. 213, Department of California, December 11, 1871, on being relieved, to comply with S. O. 431, c. s. from A. G. O.

**AZPELL, T. F., ASSISTANT-SURGEON.**—By S. O. 221, Department of California, December 22, 1871, assigned to duty at Alcatraz Island, California.

**HEIZMANN, CHARLES L., ASSISTANT-SURGEON.**—By S. O. 3, Military Division of the Missouri, January 4, 1872, leave of absence extended thirty days.

**YEOMANS, A. A., ASSISTANT-SURGEON.**—By S. O. 9, War Department, A. G. O., January 11, 1872, granted leave of absence for six months, on Surgeon's certificate of disability.

**WILSON, WILLIAM J., ASSISTANT-SURGEON.**—By S. O. 4, District of New Mexico, January 8, 1872, to accompany Troop H, Eighth Cavalry, from Fort Union to Fort Craig, N.M., and await at the latter post further orders.

**FITZGERALD, J. A., ASSISTANT-SURGEON.**—By S. O. 5, Department of the Missouri, January 6, 1872, when relieved at Fort Harker, Ks., by Surg. B. E. Fryer, U.S.A., to proceed to Fort Leavenworth, Ks., and report to the commanding officer for assignment to duty.